

THE MEDICAL AND SURGICAL REPORTER.

No. 1971.

DECEMBER 8, 1894.

VOL. LXXI—No. 23

ORIGINAL ARTICLES.

A PRACTICAL STUDY OF SERIOUS ABDOMINAL CONTUSIONS, WITH A CLINICAL REPORT OF TWENTY-ONE CASES.*

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The integumental investment of the abdomen anteriorly is thin and elastic, freely movable and resistant. As its antero-lateral areas are without solid osseous underlying supports, in the application of force the capillaries escape rupture, so that discoloration or ecchymosis, so commonly following contusion elsewhere over bony surfaces, is generally absent in this locality. With the body in the recumbent position, the antero-lateral walls being composed of yielding material, on pressure being applied here they can be forced backward or inward until arrested by the central osseous ridge of the spine. But with the body lying prone on the face and chest, as but a very limited area of the abdominal boundaries is at all exposed, and this is so powerfully protected by the spinal muscles and the lumbar vertebræ, vulnerant force must be great and concentrated to produce disorganizing effects on the abdominal viscera in this direction.

It is well to observe, also, that when a heavy substance is brought to bear on the lumbar region, the body resting prone on its anterior areas, concussive pressure is transmitted through the back and is partly spent on the thorax and pelvis.

*Read at the annual meeting of the New York State Medical Association, October 10, 1894.

FIRST CLASS.

CONCUSSIVE AND COMPRESSIVE INJURIES OF THE ABDOMEN, MODERATE OR SUPERFICIAL.

The comparative frequency of injury of the various structures and organs of the abdomen will depend on, first, their exposed situation; second, their composition; and, third, the manner in which force is applied.

THE ABDOMINAL WALLS.

Integument.—The structures which enter into the protecting walls of the abdomen and are the first to receive the impact of violence, as we would expect, are those most often implicated by injury. The most marked exception to this rule is the integumental envelope, which extends from the ensiform cartilage to the crest of the pubis and Poupart's ligament, and as far laterally on each side to the outer edge as the lineæ semilunares. Here the skin is thinner than anywhere else in the body, but its mobility and resistance are such that rupture of its capillaries and consecutive ecchymosis are scarcely ever seen, even with very extensive damage to their parts

underneath. The same peculiarity attaches to the skin covering the five lower ribs, and though costal contusion or fracture may occur, ecchymosis seldom appears in many cases until reparative processes are advanced. But over either lateral plane of the lumbar region and laterally over the lumbar fascia and oblique muscles, as far forward as where their fibers terminate in an aponeurosis, vascular effusion into the integument, with ultimate free staining of it, is a common event.

THE MUSCLES.

Striped muscular tissue in every region of the body offers remarkable resistance to trauma, and in none is this quality more manifest than in that which supports and maintains the abdominal contents.

Although some authors maintain that contusions of the abdominal muscles are an uncommon event, my own experience has been to the contrary. The lesions here, of a superficial character, in their order of frequency and importance are:

1st. Simple contusion, with or without sanguinous infiltration.

2d. Sprain.

3d. Laceration or rupture of muscle.

Simple contusions are caused by moderate blows or falls over any of the abdominal areas. Moderate soreness and tenderness follow, which pass away after a few days, as a general rule, without any constitutional disturbances. But when the force is moderately severe and falls are sustained over the ribs which enter into thoracic wings, a most painful and protracted intercostal neuralgia may follow, which is aggravated by motion, inspiration, or any spasmodic action of the diaphragm. The pain and tedium succeeding moderate concussive force applied here probably results from injury to the intercostal nerves. But in time it passes off without leaving any pathological changes in the affected parts.

Sprain or rupture of the abdominal muscles follows a sudden violent stretching of them. Such tension may occur from direct pressure, as when one is caught by some compressing agent, usually either over the hypogastrium or over the lateral lumbar muscles.

For obvious reasons we can understand how an uncomplicated sprain is seldom seen over other areas of the abdomen. In severe sprains the aponeurotic investment

of the muscle or even some of its fibers may give way.

These are most often encountered in the lumbar region, and here generally occur in consequence of a sudden lateral inclination of the spine, the affected muscles being subjected to violent tension.

A severe muscular strain is always followed by a distrait and painful lameness in the affected parts, which is slow in being recovered from, though as a rule full functional power, after a time, is reestablished. Rupture of a muscle with retraction of its ends I have never seen over any part of the abdominal walls, except where mortal injury was associated with it. The rectus is the most exposed to this lesion, and cases are on record in which rupture of it occurred by spasmodic contraction alone.

It is possible certainly that a muscle may be partly or even wholly ruptured without detection. For example, in those whose abdominal muscles are masked by deep layers of fat or when the muscle ruptures within its sheath, when the interspace is slight, and when there is no hernia of its fibers through its thecal envelope. Inasmuch as no case of uncomplicated muscular rupture over the abdominal areas has come under my notice since my practice brought me in frequent contact with traumatic cases, and more than five thousand of various descriptions of traumatism have been examined by me, I am disposed to believe that it is a very unusual complication.

THE APONEUROSIS.

The flat, broad tendon of the external oblique turns on itself below, and with its fellow of the opposite side constitutes the center of attachment, particularly of all the muscles lying over the anterior plane of the abdomen, except at the crest of the pubis, wherein the recti are inserted, and a plaque of the external oblique contributes to the formation of Gimbernat's ligament.

Tendinous structures possess greater resisting power to violence than the muscle, as we observe in injuries of the extremities, when muscles will rupture from violent spasm, or the tendon may drag away the very bone surface into which it is inserted before it will give way itself. As we will see later where contusion of the central organs is considered, the areas of the abdomen covered in

chiefly by aponeurosis are by no means the weakest.

Many attribute their hernial infirmities to blows or falls sustained some time in life over the inguinal areas. In fact, a common impression prevails that this is their usual origin. This is not surprising when we recall to mind the popular term *rupture*, which is applied to hernia and even yet persistently employed by various modern authors.

But in an inguinal hernia there is nothing ruptured or torn, nor does hernia probably ever arise in consequence of blows or falls over the inguinal region. Of this I am assured from an examination of many who have sustained blows over the inguinal region. Nevertheless, if the injured has had hernia in infancy or is the subject of one in the process of growth, there can be no question but violence may hasten its development or impart serious features to it.

SECOND CLASS.

CONCUSSIVE AND COMPRESSIVE INJURIES OF THE ABDOMEN, CENTRAL AND SERIOUS.

While peripheral trauma of the abdomen is not uncommon, deep or central is met with sufficiently often, and is so grave in its consequences as to warrant a careful consideration of it. This is particularly opportune at the present, since aggressive surgery has essayed to treat many visceral lesions of the abdomen by direct intervention. It has been quite generally conceded that operative surgery at present in many pathological conditions within the abdomen is a means more effective in prolonging and saving life than the more conservative constitutional measures in vogue before the time when anesthetics, antiseptics and experimental studies had made it a permissible procedure to open the abdomen in the living subject.

How far similar radical surgical procedures may be utilized in those contusive injuries associated with the laceration or rupture of the organs, it is highly important to determine.

QUALITY OF PHYSICAL FORCE IN CRUSHING LESIONS OF THE ABDOMINAL ORGANS.

The above may be divided into two varieties:

1. Percussive or concussive.
2. Compressive.

Percussive or concussive force is an etiological factor of great importance in many injuries to the deep viscera, and especially to the solar plexus. The abdomen may sustain the impact of a quickly moving body, as a ball thrown with great impetus, an arrow, a spent missile, or in fact any projectile moving with great velocity, which may reduce a solid viscus to a pulp, rupture the intestine or widely open the vascular structures, and yet leave no trace of injury at the point where it struck the integument.

Thus in one case that came under my care in hospital nine years ago, a burglar was fired on by a policeman as he was escaping through a window. The shots were fired from a thirty-two-caliber revolver at a range of about thirty feet.

After the second shot the burglar fell back into the room. He was immediately sent into the hospital. He was seen by me three hours later. He was now in mortal shock and incessantly groaned from pain in the abdomen. On examination it was discovered that he had apparently been shot in but one place. This was through the convexity of the deltoid, the ball passing completely out. But his urgent symptoms were abdominal. Here, however, there was no discoloration to indicate contusion, though on examination it was evident that he had a large internal hemorrhage. He died six hours after admission. On post-mortem examination the coeliac axis was found widely opened and the jejunum was nearly torn in two just where it emerged at the left under the cardiac end of the stomach.

The cavity of the peritoneum was flooded with blood and intestinal contents.

The sympathetic ganglia and solar plexus receive many communicating filaments from the vagus and the internal terminals of the anterior division of the spinal nerves from the lower dorsal region of the cord.

This may perhaps partly explain why a sudden severe blow over the epigastrium produces such an impression over the cardiac and respiratory centers. There are few males who pass through life that have not experienced that sensation of great distress which follows percussion or a fall over the upper abdomen. The immediate

sensation is inability to breathe for a moment, when it is said one has "had the breath knocked out of him." In the more aggravated cases syncope follows with great prostration and nausea.

Taylor sets this type of injury down as an occasional cause of death; for in writing on the subject he says: "There is no medical doubt that a person may die from shock without any external evidence of injury being found after death" ("Medical Jurisprudence," p. 317, 1880). Mr. Hodgen is emphatic in his statement that death may immediately follow an injury of the abdomen without any external or internal evidence of it being discovered on autopsy.

"There may be," he says, "a slight abrasion or contusion mark on the skin, but these are neither constant nor necessary accompaniments of the blow. Convictions of manslaughter have taken place under these circumstances" ("Abdominal Injuries," Holmes' "System of Surgery," vol. iii, p. 217). Mr. Alfred Poland (*ibidem*), in his prize essay on the subject, said that "the upper part of the umbilical and epigastric regions contains such vital structures, and above all, the solar plexus and its numerous branches, of such high organic importance, covered in by soft parietes, but little capable of receiving or transmitting external shock, that it is not to be wondered at that death may be the immediate consequence of injury in this region." We are told that in the March circuit at Cambridge, England (1857), John Bond was indicted for the murder of his wife. He beat her violently over the stomach with a six-pound codfish. She died almost at once after the first few blows were delivered (Holmes' "Surgery," vol. i, p. 885).

Austin Flint (2d) records a case of death resulting from a blow over the epigastrium. The patient was a young man who had been hit playfully by a fellow-waiter. Flint made the post mortem examination and declared that he could find nothing to account for death ("Human Physiology," revised ed., p. 912). Chavasse in 149 observations on deaths from abdominal injuries reports 36 of them as having been induced by kicks from horses and 13 by kicks from men. Guthrie records the case of a male infant which was projected up in the air about six feet, his father catching him as he came down

over the abdomen, his thumb projecting upward. The infant died almost instantly. On autopsy an extensive rupture of the intestine was found (Guthrie, "Principles of Surgery," p. 217).

PERCUSSIVE VIOLENCE OVER THE EPIGASTRIUM AS A CAUSE OF DEATH.

Can a blow on the stomach or anterior abdomen produce death without producing such pathological changes as can be traced or detected afterward?

In this materialistic age of ours, when it is assumed that symptoms are always but the expression of organic changes and when facilities are at our command for purposes of rigorous analysis, it might seem that a prompt and definite answer could be given to this question. Still, truth demands that, however humiliating it may seem, it must be confessed that there is a multiplicity of morbid manifestations which have no tangible, visible organic mutations that will account for them. Their fountain head is the nervous system and vital changes. Possibly those rare cases of sudden death after a blow on the abdomen belong to this category. The anatomical, physiological and vital relations between the stomach, heart and brain are most conspicuous, and these are always most clearly accentuated in what we designate functional maladies. In my search through the authors for evidence to support or refute the assertion that death may follow a blow on the epigastrium, the results were unsatisfactory, for there was great discord of opinion, and in some works by eminent surgeons which were examined this class of injuries was scarcely mentioned.

The general tenor was in the direction of skepticism, and anything approaching a positive opinion could be found in but rare instances.

I could find no author who had ever had a well-authenticated case in his own practice, though there was no paucity of hearsay evidence and ingenious theorizing.

Ashurst says that "since Pollock's researches, it appears doubtful if rapid death can follow abdominal injury; though there can be no question but rapid death may follow those injuries, either from concomitant shock or from a condition of the solar plexus analogous to cerebral concussion; in either case, however, there

would probably be physical lesions after death" (Ashurst's "System of Surgery," p. 391). This statement is so ambiguous as to carry no positive force, for every one knows that certain abdominal injuries are quickly mortal; but they have a definite pathology. The physiological comparison between the solar plexus and the brain will not hold.

Mr. Thomas Bryant ("Treatise on Surgery," p. 278) is scarcely less equivocal on this point. He says that "under certain circumstances a trifling blow on the abdomen may give rise to symptoms of an alarming nature . . . the absence of shock may lull suspicions;" and he adds, "however trivial an injury of this kind may seem, it should be regarded with apprehension and the utmost caution and care manifested in its treatment. How far sudden death is attributable to shock or collapse from a blow on the abdomen without organic lesion is an open question."

Le Gros Clark ("Surgical Diagnosis," p. 207) maintains that shock in itself is not a reliable criterion of how extensive a deep lesion may be, and warns us not to be too precipitate in making a favorable prognosis.

Agnew was reserved on this question.

Dr. Sanborn's case, which occurred in Lowell, Mass., is interesting in this connection. The patient was crushed against the side of a house by the handle of his hand-cart hitting him on the stomach. He felt faint for a moment, but pushed his cart into the shed.

Violent symptoms followed, and he died in forty-eight hours, when a large rent was found in the small intestine (Boston *Medical Journal*, May 12, 1859).

Pirrie believed that blows received over the stomach or duodenum were more dangerous than those in other situations ("Principles and Practice of Surgery," p. 598).

Miller observed that a contusion of the abdomen, though it might leave no visible marks on the integument, yet might do great internal damage; and further, when the deep viscera escaped, the chances were that in consequence of the damage to the abdominal muscles atrophic changes and weakening were quite certain to follow ("Practice of Surgery," p. 216). Le Gros Clark adds that "if the doctrine be true that a blow on the abdomen may cause

death, it must be a very rare accident." Holmes practically repudiates the doctrine *in toto* ("Encyc. Surg.," vol. ii, p. 854).

Hunter McGuire, of Virginia, has reported a case of a soldier who was killed by a spent ball hitting him on the belt over the abdomen. On autopsy nothing was found to account for death.

Guthrie believed that violent blows over the anterior abdomen might lead to its ultimate absorption and relaxation, thereby favoring the advent of hernia without rupture of muscle fiber. He cited such cases in his own practice.

Gaut adds his testimony to the probability of blows over the abdomen causing fatal results, and says that "wasting and weakening of the abdominal walls is one of the consequences of severe percussion here" ("Science and Principles of Surgery," vol. i, p. 532).

With a view of determining as far as possible the views of surgeons on the question of contusions of the abdomen in recent times, since surgery of this region has so largely occupied the attention of the profession and operations have been performed on a prodigious scale, an examination was made of nearly all the leading contemporaneous exchanges, domestic and foreign, that have been issued during the past fifteen years.

The most conspicuous feature in the search was the singular paucity of cases chronicled. It may be said that during this period the subject of abdominal contusions has not received the attention which its importance merits.

During that space of time there was no case recorded of death from abdominal contusion of that character which is devoid of pathological lesion.

It may be said that in recent times the general tendency of the profession is to deny the possibility of death from an abdominal contusion, without tangible evidence of disorganization of structure succeeding.

Modern studies, research, experimentation and personal observation all tend to discount and repudiate the assumption that death is possible by a blow anywhere over the abdomen of a man in sound health, without gross structural lesion succeeding.

Mortal concussion of the brain at the present is denied by many of our ablest authors. And concussion of the spine

without serious central changes has been incontestably and conclusively proven to be little more than a mere myth. Probably concussion of the abdomen rested on an equally shaky foundation and has had practically nothing to support and perpetuate it other than the parrot-like practice of the past in copying from one work into another notions which were wanting the stamp of personal observation and had nothing to support them except their hoary antiquity.

CONTUSIVE AND COMPRESSIVE INJURIES
OVER THE ANTERIOR WALLS OF THE
ABDOMEN, INVOLVING THE
DEEPER ORGANS.

Although since 1882 but comparatively few cases of the description here considered have found their way into current medical literature, yet they constitute a considerable share of all traumatisms in every hospital.

They are not, however, by any means as common as injuries of the head or thorax, though an equal or greater surface is exposed. This is because, as heretofore explained, the abdomen is best protected, and owing to its physical composition it is best capable of resisting injury.

The consequences attending or following an abdominal bruise will always depend on various circumstances.

First, the region which has sustained impact.

Secondly, the volume of force and its quality.

Thirdly, the structures involved.

We have but a vague conception of the extent of abdominal resistance and of propulsive power until we have an opportunity to observe it in the parturient act or when we have opened the abdomen in the living man and observed the tremendous energy sometimes required to hold the intestines back when violent retching sets in and all the abdominal muscles are brought into play.

Local abdominal bruises are often witnessed. Blood may be extravasated into the muscle's sheath and cellular tissues, nerves lacerated and tendons strained.

In this class recovery is rapid and full function quickly restored. Parietal lesions of a more serious character may, however, follow later on.

Rupture of the muscle may succeed. In one case, cited by Camper, the rectus was

lacerated and the internal epigastric artery opened, the patient sinking in six hours from internal hemorrhage (Camper, "Contusions de l'Abd. An. Ch.," vol. viii, p. 712).

LOCATION OF INJURY.

Inasmuch as the abdomen is not equally protected, its contents varying in mechanical resistance, in their vulnerable qualities and in their exposed position, it follows that the effects from the same volume of force must vary according to its point of impact. Thus when a blow is delivered over the scrobiculus cordis, over the great centers of the sympathetic or the pneumogastric and in close contact with the cardiac organs, we may expect greater shock and functional disturbances than if the same volume of force was delivered over the loin or elsewhere.

A blow directed obliquely would be capable of less disastrous consequences than one aimed directly over the median axis of the abdomen in the direction of the vertebral columns.

Violence applied over the walls of the thoracic vault of the abdomen, when not too great, is reflected back by the elastic lung and ribs.

It is probable that pure concussive force, however applied to the abdomen, is often so diffused as to impinge equally on all the floating viscera.

But with the *direct compressive* quality, as will be seen, the damage is sustained at a point in close vicinity to where violence has been inflicted.

Indeed, there is no proof that there ever are disorganizations of the viscera by *contre coup* force in abdominal injuries as we often witness them within the skull.

VOLUME OF FORCE AND ITS QUALITY.

It is clearly evident that in all abdominal as other injuries, much depends not only on the volume of force, but the manner in which it is applied.

Percussive force, as kicks or blows, derive their destructive quality from their velocity, concentration of action and the limited area of their impact.

Hitting a hollow viscus which is distended with gas or liquid, as the small intestine, the bladder or stomach, may cause a rupture of it.

This same quality of force when brought to bear on a solid organ shivers or lacer-

ates it, reducing what it strikes, perchance, to a pulp.

Compressive force is slower in action and probably attended with less danger to life than the former. Owing to this characteristic, movable organs are permitted to shift into such situations as will afford them most protection, besides adapting themselves to best resist danger.

This perhaps may explain why the distended stomach and intestine so often escape after great weights have passed over the abdomen.

But the effect of a crush, as in a buffer accident or under other circumstances, is widespread and produces a lesion which involves a whole organ and contiguous structures.

Thus in a man crushed by a loaded cart-wheel, under my care a year ago, there was coincident laceration of muscle, omental hemorrhage, rupture of the ilium and contusion of the right kidney. The shock following compressive injuries is sometimes very great, though in my experience it is not so dangerous as that seen in contusive variety.

IMPORTANCE OF STRUCTURES INVOLVED.

If we proceed from above downward, we will observe that the spleen and stomach are so situated as to best escape force, the latter particularly when collapsed and contracted.

The liver, too, is well sheltered. The gall-bladder is more exposed and hence is more often damaged. But when great force is applied over the floating ribs on the right side the liver is crowded against the spine and lacerated. Rupture of this organ is serious because of its great vascularity and the danger of mortal hemorrhage following. The same may be said of the spleen.

In the umbilical region the ilium lies close to the abdominal walls and is in great danger in event of injury. Certainly all will depend on whether more than one or two of its coats have given way, and whether the rent is a small or large one; possibly also on whether its leakage consists of gaseous or liquid elements.

The vertical segments of the colon are so well protected that they seldom rupture. When they do their fecal contents excite prompt, septic inflammation.

The kidney is frequently injured. When the trunk is seriously contused,

or compressed over the lumbar spine, and when great force is applied over the loin anteriorly, it may also suffer contusion. If, however, it is peculiarly vulnerable, it likewise possesses marvelous recuperative power; but when its large blood-vessels are opened death may follow by rapid exsanguination, the blood draining off either by way of the bladder or infiltrating into the connective tissue.

The organs of the pelvis are safe from harm unless their osseous shell is crushed in or they are distended and rise in the abdomen, as do the impregnated uterus or the enlarged bladder. Rupture of the bladder when the tear is completely through all its coats and intra-peritoneal is a serious accident, though it is a rare one which but few ever witness. The ureters, chyle ducts, pancreatic duct or the thoracic duct are sometimes ruptured, when the more superficial organs entirely escape.

A case of rupture of the common bile duct has come under my care which was caused by the patient being run over. The case ended fatally on the sixth day, and on autopsy a rupture of the common duct was found, though all the other neighboring organs were sound.

A case of rupture of the thoracic duct came into my service last year, caused by a run-over accident, the patient recovering.

Traumatic rupture of the ureter has been reported.

The vascular system is nearly always implicated in serious abdominal injuries, and the presence of a large hemorrhage in many is a contributory cause of death.

[TO BE CONTINUED.]

Unsuspected Qualifications.

"Your daughter," said the manager in apologetic tones, "while she may become pleasingly proficient, will never be a great singer."

"Oh, that's all right. You don't know her yet—she shocked four communities before she was 16."—*Washington News*.

A Large Variety.

Teacher—Johnny, you may describe Chicago's climate.

Johnny—Which one?—*Chicago Record*.

IS THE ACCEPTED CLINICAL PICTURE OF GASTRIC ULCER CORRECT?*

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The ordinary conception of gastric ulcer is that it occurs by preference in females, especially in anæmic young women under twenty-five or thirty, and that it is attended by superacidity.

From Ribbert's series of 3,476 autopsies in Zurich and Nolte's series of 3,500 in Munich I have computed the following table, showing the average pro-

Stoll shows that the greatest mortality from gastric ulcer (or at least the greatest number of ulcers found post mortem) occurs in the fifth decade of life, and nearly as many in the third, sixth and seventh decades. Considering, however, that more and more people die in succeeding decades up to the ninth (see fifth column of table), a slight modification of Stoll's deductions

CASES OF ULCERS.

Age.	Male.	Female.	Total.	Probable No. of Corpses.	Percentage of Cases of Gastric Ulcer in Each Decade.
Fœtal	1	0	1	0	0.0
10-20	2+	7	9	600	1.6
20-30	7+	10+	18	700	2.6
30-40	12+	21	33	800	4.1
40-50	18+	18-	36	900	4.0
50-60	12+	19	32	1,300	2.5
60-70	4-	24+	28	1,900	1.5
70-80	5	15+	20	2,300	0.9
80-90	1+	0	1	1,300	0.08

portion of gastric ulcer in 10,000 miscellaneous corpses, equally divided between the two sexes. As so few cases occurred in childhood, I have appended a column, computed from actuaries' statistics, showing the number of deaths in each decade, starting with 10,000 persons at the age of ten. The same proportions ought to hold good for the ages of a miscellaneous collection of 10,000 corpses as if we followed any particular group of 10,000 to the time of their death.

* The writer disclaims all originality of research in this article, which is based on one of Dr. August Stoll, of Zurich, published in the *German Archives for Clinical Medicine*, October 28, 1894. Dr. Stoll, in turn, acknowledges his indebtedness to a number of authors to whom due credit is given as they are here quoted. The extreme length of Dr. Stoll's article—which would fill an entire number of *THE REPORTER* except the pages devoted to miscellany—prevents its appearance as a translation.—A. L. B.

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is necessary. The last column of the table shows that the liability to death with, if not from, gastric ulcer reaches its maximum about the age of forty and diminishes almost equally as we ascend or descend from that number.

As regards sex, Ribbert found 2.59 per cent. to be the liability for females; 1.83 per cent. for males. Nolte's proportions were 1.23 per cent. and 0.8 per cent. respectively. It will be noted that from the tenth to the fortieth year males are more prone to violent deaths than females and, conversely, are less liable to disease. In the fifth decade, when the two sexes lead similar lives the relative frequency of ulcer is practically equal. The preponderance of ulcer in old women is, I believe, partly due to the fact that after middle life there are more women living and, paradoxically, more dying than

men. Thus gastric ulcer is not preëminently a disease of youth and the female sex, but of the middle-aged of either sex.

In comparison with the statistics of autopsies, the following series of Eichhorst at Zurich is of interest. His 90 cases were diagnosed clinically, all but 18 recovering. Of 7,720 male patients, 55 had gastric ulcer; of 4,625 females, 35 had ulcer; 71 per cent. and 73 per cent. respectively. I have added to this table a column showing approximately the percentages of a miscellaneous population between the tenth and seventieth years as they would fall into decades. It is by no means certain that a similar division of hospital patients would show the same

not been altered to show proportions in 10,000 cases. Considering that almost equal proportions of male and female patients had gastric ulcer, it was not thought necessary to adjust the table to a scale of 10,000.

Stoll concludes that latent cases of ulcer are rare. Of the 90 patients, 25 were not incapacitated till the time of pronounced hemorrhage, but all had suffered from some form of gastric disturbance.

It is difficult to depict any clinical type. Stoll found constipation in 32 cases; coated tongue in 25; diminished appetite in 21; albuminuria in 5; indicanuria in 16; very good appetite in 8; diarrhœa in 6; family history of stomach trouble in 12. Not one of these observations is of

EICHHORST'S SERIES.

Age.	Number of Cases.			Percentage of Whole No. of Cases of Gas- tric Ulcer by Decades.	Percentage of Popula- tion by Decades, ex- cluding all under 10 and over 70.
	Male.	Female.	Total.		
10-15	0	0	0	3.3	21
15-20	2	1	3		
20-25	3	6	9		
25-30	13	7	20	32.2	19
30-35	8	8	16		
35-40	7	4	11		
40-45	6	2	8	30.0	18
45-50	8	3	11		
50-55	4	1	5		
55-60	3	1	4	21.1	17
60-65	1	1	2		
65-70	0	1	1		
				10.0	14
				3.3	11

percentages, so that the comparison is a very crude one. While the second and seventh decades furnish the same proportion of cases of gastric ulcer, it must be borne in mind that there are just about twice as many people living in the former as in the latter decade. It will be noticed that while the autopsy reports showed gastric ulcer to center at the age of forty, these statistics move the maximum point ten years earlier. However, the average age of the fatal cases was forty-three years, the youngest being thirty.

Unlike the previous table, this one has

any assistance, either positively or negatively, in the diagnosis of a doubtful case.

Thirty of the 90 cases were examined as to hydrochloric acidity, the examination being only qualitative except in 4 cases and made sometimes after a test-meal, sometimes on vomited matter without noting the time after eating, sometimes on wash-water after lavage. In 5 cases there was non-acidity after a test-meal, one of these cases being a carcinomatous ulcer. In two or three cases (one in which quantitative methods were used and one or two

in which the stomach contents after dilution still showed the phloroglucin-vanillin test) superacidity is clearly made out. The remainder are normal as to acidity, or else the tests were so made as to have no definite value. There are not more than 11 cases in which superacidity is even hinted at. Seven quantitative tests were made in 4 cases, the hydrochloric acidity varying from 1.05 to 3.3 in 1,000, the normal ratio being about 2 in 1,000. Kugel's 18 cases of peptic ulcer showed normal acidity in 8, superacidity in 4, sub and non acidity in 3 each. The most liberal interpretation of these two series, comprising almost 50 cases, would indicate that superacidity, to which so much value is attached in the diagnosis of gastric ulcer, occurs in not more than 20 per cent. of all cases, while the acidity is below par in about 25 per cent.

Absorption, as determined by the administration of potassium iodide in capsule, was shown to be normal in 6 of 28 patients, iodine being found in the saliva after seven to fifteen minutes. In 6 others absorption was delayed to twenty to twenty-five minutes, and in one to forty-five minutes. Personally I am inclined to doubt the reliability of this test, especially unless the solubility of the capsules is proved by control tests.

The location of gastric ulcer is at or near the pylorus in 60 per cent. of male cases; on the lesser curvature in 40 per cent. of female cases. Otherwise there is no predilection. Stoll explains the sexual difference as follows: In men the weight of the liver, descending with costo-abdominal respiration, forces the gastric contents repeatedly against the pylorus. In women the lateral constriction of corsets changes the shape of the liver and makes the right side of the stomach—that is, the lesser curvature—bear the brunt of the respiratory impact. Still, not all of the female cases were those of corset-wearers.

In 15 out of 75 cases and in 11 out of 18 death resulted from perforation. In 4 of the former series (seen at autopsy) an open artery was found at the bottom of the ulcer, and in several of the 18 cases death resulted directly from hemorrhage. Other complications are not particularly significant.

One patient, a woman aged forty-seven years, who was in the hospital at Zurich

for six months without much change in her condition, eliminated a great deal of urea by vomiting. There was no other indication of renal disease. For example, May 21st the urine amounted to 200 c.c., containing 1.4 gm. of urea; the vomited matter, 1,600 c.c., contained 12.8 gm. of urea. In about 25 examinations the total daily elimination of urea ranged from 2.4 to 15.6 gm., fully half of which was eliminated by the stomach. Considering the emaciation and quietude of the patient, 0.20 gm. would be a normal elimination. It is not definitely stated whether the vomited matter was mainly blood or not, except in one or two instances, when the gastric elimination was slight and when the vomit was only tinged with blood. I have several times noticed that the stomach eliminated urea in renal insufficiency, but in cases of gastric catarrh, not ulcer. The catarrh in these cases was due to circulatory changes, especially chronic congestion.

I believe we may conclude—

1. That gastric ulcer occurs slightly more often in women than in men, but not directly because of their sex.

2. That three-quarters of all cases occur between the ages of twenty-five and sixty, the maximum of occurrence being at the age of thirty, of death at forty. That the occurrence of gastric ulcer, either fatal or not, falls off rapidly as we investigate younger persons, slowly as we consider older ones. That many ulcers that are found post mortem have occasioned no clinical symptoms.

3. That superacidity, while doubtless predisposing to the formation of an ulcer, seldom persists after its establishment.

4. That aside from hemorrhage, pain and tenderness are almost the only diagnostic symptoms that are to any degree reliable.

5. That death from ulcer occurs in a plurality of cases from perforation and peritonitis; seldom directly on account of hemorrhage; in the majority of cases from exhaustion and various intercurrent or complicating affections.

“OUR preacher made a big mistake last Sunday and lost a collection,” said a Manchester man. “How?” “Well, he appointed a tax collector to go around with a plate and every man in the congregation asked him to call again.”—*Tit-Bits*.

THE HUMBUGGERY OF THE HUMBUGGED.

S. S. TOWLER, M.D., MARIENVILLE, PA.

While it is to be admitted that there is still a large field for cultivation in the line of "psycho-therapeutics," and also conceded that there is more than "something" in it, it must be full as readily admitted that the profession is as apt to slop over in the effort and offer and swallow as sense as fair a lot of trash in that line as it has done in the past in some other studies. Advanced as we are in this ninety-fourth year of the nineteenth century, it takes some time to separate the wheat from the chaff, and we have frequent cause for a little blush when we discover how credulous we have been. We admit of many cures through "mental therapeutics" by all sorts of methods and perhaps take but little thought of whether we have not been largely fooled ourselves in the contemplation of the process.

It is an old, old story—that of pilgrims visiting shrines and leaving, as they did at the chapel of Father Mollinger in Pittsburgh, "crutches by the cord." The story and romancing of quackery is just as old, while Christian science and faith cure have long held, under some name, a hold on many minds. Some writers in the regular profession only see in it a rational process that can be comprehended by the profession, but not explained to the lay mind, while others look upon it as a process not yet understood and one that the profession should seek to understand and utilize. So the proposition has arisen that the way to combat the "Christian scientist" is to do the same works and explain the process as best we can by study and research.

In this view of the question, let us first remember that just the same cures which the quack and all his allies claim to have done have been done by educated physicians time and again. True they did not claim to do them by "mental cure," "hypnotism" nor any other mysterious process. They loudly proclaimed by all sorts of advertisements that it was all done *secundum artem*. They asserted (or rather do assert, for there are hundreds of them still in the business) that they were so superior to all other medical men in skill, so far advanced in medical knowledge, that they could do

what no other medical men ever did. So far as the general public ever knew they accomplished that very thing. Their triumphs were just as great, their cures just as good, their clientage just as large, and their fees larger than any of the first classes mentioned. True their course was not and is not considered reputable by ethical practitioners, but the fact remains that they were and are educated physicians and did do and are doing, without any claim to the mysterious, all that the quack, the Christian scientist or any other of the same class do.

It is not an uncommon thing to see a crowd numbering hundreds pressing their way into a hotel to visit a traveling doctor whose diploma was issued by time-honored Jefferson or by Pennsylvania's great university. The lame and the halt, the blind and the deaf, the old, old chronic—all sorts and conditions of patients are there. The "cords of crutches" are left, the deaf hear, the lame walk, and nine out of ten declare themselves better. How many were permanently better is never known; how many fooled themselves and perhaps fooled the doctor is never found out. But we do know that it is the same old scene over and over again, and that on the arrival of the next "great wonder," regardless of name, a great majority of the faces and forms of the afflicted throng are very familiar; they have been, like the "wonder," in the same business many times before.

We pass all this by with a feeling of contempt for both doctor and patients; we say he humbugged them; we see nothing mysterious in the process; and yet when a Christian scientist or quack only imitates the "regular," we are alarmed at the exercise of a power that cannot be explained. There is certainly nothing more wonderful in the one-process than in the other, and success, such as it is, largely owing to the same causes. Under a vast proportion of it all from beginning to end is to be found delusion.

Take a common case in every-day practice. A female patient wakes up some morning with "that tired feeling," perhaps a trifle anxious as to the time of

month it is. She takes down the "patent" almanac, and in hunting up a date she begins to read. In half an hour she has found herself possessed of half of the diseases mentioned in that wonderful "manual of health." Before night she is "quite ill" and next morning is taking the first of "six bottles" to be taken before cured." She finds in that almanac wonderful cures of as many diseases as sinners ever suffered or that fled at the sight of the bones of a saint. Some new thing, some change in family affairs or environment, happens, and she is "cured," (?) and that medicine of course did it. This is related to all her friends, and a host of them "feel the same way" and go through the same process. Those who are disappointed in results fly to some new cure, the quack, Christian scientist or the traveling doctor.

Say she goes back to the family physician, and then comes the rub for him. If he tells her the truth, ten chances to one he loses the patient. If he humbugs her and leaves her to her delusion, accepting her diagnosis and treating her on the strength of that delusion, he adds laurels to the crown of the quack. For be it everlastingly remembered that we cannot assert and claim to do what we do not do without opening the door to the worst imposture.

Indeed, it is at least doubtful if quacks and Christian scientists, etc., could have had the glory to which they have attained if educated physicians had been more honest. If we will magnify simple complaints into serious diseases for the sake of making ourselves famous and our pocket-books fatter, we cannot complain if the quack claims to cure these same misnamed serious disorders. If we humbug the patient, the patient will humbug many others; these in turn continue the process. They don't all go to the original humbugger, but go with his diagnosis to the quack. Some of them get so deluded that the original humbugger fails to cure them himself, by mental therapeutics or otherwise.

To the young man entering an already overcrowded profession the temptation is great to assume a great deal. He has read of the "called-out-of-church" expedient, of the "horse-rushed-out-of-town" dodge, of "tricks of the trade" almost unnumbered, until he feels, in truth, that

The whole world loves the modest man,
Whether he be great or small,
But yields up its plunks in great big chunks
To the man with a surplus of gall.

The whole world loves the quiet man
Who's as silent all day as the owls,
But needless to mention it gives its attention
To the fellow who gets up and howls.

The whole world loves the peaceful man
Who sees no occasion to bicker,
But the full right of way, you'll permit me to say,
It gives to the strenuous kicker.

"Gall wins," he says to himself, and then farewell to all that was in him of the true physician and all hail to anything; everything that brings notoriety if not fame. He struts down street; he rushes to the drug store with an empty bottle; he slams in and out of the office; every case is extraordinary; the treatment a new departure and every recovery "a snatch from the brink of the grave."

This class of doctors is quite numerous. Some of us smile half in amusement, half in contempt, at the performance, but how few think of how very, very much it all adds to the triumphs of the quack and the disciples of "Mother Eddy."

Again, we grow sarcastic in disgust at the humbugged laity, and seldom care to acknowledge that we have been humbugged ourselves. We say, "They read the advertisement and believed it;" "They swallowed the patent-medicine almanac and got sick." But what about that time that we received a circular setting forth the particular virtues of, say, "Hoang-nan comp.?" We are given a few pointers from a *materia medica*, the information that "it can only be got in its simple purity and according to scientific formula from Rubs & Dubbs," and that it is just the thing "for those hardly definable cases that so often puzzle the busy practitioner." Then follow certificates (more or less like those in the laity almanac) from various medical men and a few professors and a quotation from a medical journal. We don't stop to read up on "Hoang-nan" or to take into consideration what the "comp." stands for, nor if there may not be something incompatible connected with its use; but we try it on one or two cases "to see how it works." If the patient gets better, then our name too is added to the list of "eminent physicians who commend this remedy." It was the professional bait that was swallowed—that was all the difference between

us and the laity, save that the latter were more excusable. It is all of a piece with the delusions of the deluded who go in crowds to the quacks, the Christian scientists and the educated traveling and largely advertised doctor.

Beneath the humbuggery and delusion lies this: Where an objective mental condition becomes a subjective mental condition, all things are possible to it viewed in the light of its own reflection or that of a stronger mental condition. The great majority of persons cannot be said to really think; many think they think, the few truly think. These last are the only investigators. Again, we are all more or less like sponges—we absorb the element into which we are thrown, and that unconsciously to ourselves. The orator sways his audience at his will, especially if they have gone prepared to be swayed. The quack and the Christian scientist command and succeed with the neurotic case because the patient has placed them in command from the start. The patient goes in the subjective condition. The traveling doctor occupies the same advantage and cures the neurotic case, for at least the time, when you had failed. Put it right down in your mental diary that the most probable cause of your failure was that the patient knew you too well. In spite of all you had done in the family for years, in spite of your successes, you were after all to her a very familiar personage and had become common. All the psycho-therapeutics you can invoke won't do you a bit of good; her mental condition, so far as you were concerned, was not subjective. But go off a hundred miles, fill your office with patients, let that same old client pass through the throng to your consulting-room, and dollars to doughnuts you cure her in great shape.

To a great extent we are all "just so." In certain subjective conditions we receive, we believe, we are controlled. The woman reads the almanac in that frame of mind, the doctor in the same mental shape becomes subjective to the circular. The student swallows all that the professor says, no matter whether it be the vagaries of Samuel Hahnemann, or a revival of the tractors of Elisha Perkins, or the sound common sense of honest Horatio O. Wood. Speaking of Hahnemann and Perkins, it is a valuable piece of history to remember that Hahnemann was opposed violently

and even savagely while Perkins' tractors were received with favor by quite a number of the learned regular profession. In London thousands of cures were published and certificates from professors, physicians and surgeons and clergymen added thereto. In Denmark volumes of cures were published by authority of physicians of high standing, yet Hahnemann was a scholar, while Perkins simply humbugged with two pieces of metal. To connect the two periods of then and now we have only to remember that the works of Hahnemann are still used as "text-books" and the theory taught in certain medical schools, while the practice has been largely abandoned by the professed practitioners. Also to remember that the long catalogues of complicated machinery that are advertised (and readily sold) under the head of appliances, splints and instruments exhibit a tendency to slop over in that line in a degree equal to the patrons of Perkins' tractors. Dr. Joseph Eastman's story illustrates this. He says: "The professor appeared before the audience and waved a new medical instrument before them for five minutes and then said: 'Gentlemen, the only reason I have for this exhibition is to say that this instrument cost me eighty dollars and isn't worth a damn.'"

A reader of a pet medical journal gulps down without a struggle all that his patron saint writes, and the doctor who "thinks he thinks" becomes the most conceited man of the lot. Haven't you read an article in that subjective mood, gone out and followed it to a dot, and about a week after, when you were in the objective case, wanted to kick yourself all over your own bailiwick for doing it? I have, and I must be a far more singular person than I take myself to be if many readers of this article have not felt just so.

Again, we grow indignant at the lay advertisements of "Pennyroyal pills" and "cotton-root" mixtures for the prevention of pregnancy, and yet never kicked (except in our mind) when medical journals advertised pessaries and fixtures that had no other purpose and whose use could only produce an abnormal condition of the uterus.

There is little room to expect improvement of the laity in the line of humbuggery until we have advanced beyond it ourselves. I am not in controversy with any of the known or unknown quantities

of psycho-therapeutics, but I do assert that nothing has been done by the "Christian scientist" or any other of his kith or kin but what has been done again and again by educated physicians, and can be done by any one who is willing to adopt the methods. Those methods, however, involve a great deal of deception and the humbugging of the humbugged. I further assert that no reliable proof has been offered that these people ever cured by mental therapeutics a case of a veritably diseased organ or a neurotic case originating in and from a diseased organ.

It is a matter of common knowledge that the average doctor pays either too little or too much attention to his neurotic cases. If able to pay, the tendency is to slop over and become too fussy; if poor, they become a source of annoyance to many, but little attention is paid to them, and they become the prey of the quack. Again, there is that quite numerous class who will not make any effort to pay the local physician (and of course he does not want to spend his time for nothing on cases of that kind), yet always manage to raise a five or ten dollar fee for the traveling M. D., the C. S. and the quack.

But it is a mistake to think that mental cure, or influence of mind over body, is not very largely recognized by the profession. It was so taught even in ancient days, the "placebo" is an old-timer, and bread pills have cured (!) many a patient in years long gone by. It was and is only one of the ways of administering "mental cure." To day all forms of nerve disorders as well as imaginary troubles are claiming more thought and research than ever before, but the methods have nothing in common with the ignorant quack or the—perhaps—self deceived Christian scientist.

The painful reflection is this, that there are eight thousand physicians in this State alone, and if they were actuated by a common purpose, common honesty and with a common proficiency, what a power against all forms of quackery and medical fraud they could and would be! That they are not so is largely responsible for the success of the frauds; and that they are not so is very fair evidence to the laity that there is something wrong in our general make-up. The remedies for what have justly been called "these abuses"

on the part of quacks and all their allies are: first, professional honesty; the setting of our faces like flint against deception of any kind in and out of the profession; a common purpose to raise the moral standard as high as the great responsibility of our calling demands; a common purpose to elevate and help each the other "in the spirit of unity and the bond of peace." Second, a remedy helpful to the end wished for is in (as has been already suggested in Dr. Langsdorf's paper on "Christian Science") appropriate legislation. There are no good reasons for permitting sacrifice of human life by faith curists, any more than by any other class of ignorant practitioners. Third, by the education of the public.

The first can only be accomplished by bringing all fair practitioners into the local, State and national medical societies. The second can only be accomplished by exhibiting to the Legislature unquestionable proofs and instances of life sacrificed through the ignorance of the parties using the method denounced. The last can best be accomplished through leaflets for common distribution and the use of the secular press. To reach people we must use the channels that pass into and through their homes. The State Board of Health has done untold good by the liberal distributions of its circulars and leaflets on sanitation—disinfection, diphtheria, scarlatina, typhoid fever, etc. And the good has been greatly aided, the advice given more generally received, because it bore the impress of the Commonwealth. In short, it came with authority. The power and dignity of Authority with a big A is a great educator. Leaflets should be issued by the Board of Health and also by the State Society, thus carrying with each utterance the authority that commands respect. The secular press should be used by a series of articles from men whose very names demand attention and whose "copy" the press will be glad to get. Above all, let every lesson be taught in plain language for plain people. "University extension" is a laudable enterprise; let us extend its principles to the line of preventive medicine and the uprooting of humbug.

HOAX—I hear Judson is making over \$1,000 a day. JOAX—Get out. HOAX—Yes, he is; he's a coiner in the mint.

CHOREA.

W. B. ATKINSON,* M.D., PHILADELPHIA.

Chorea, or St. Vitus' dance, by which name it is so well known among the people, occasionally proves so intractable that fears of grave results are felt. Thus the convulsive movement may become so pronounced as to totally prevent sleep until the child is utterly exhausted.

Recently I have had several cases come under my notice, in each of which sleep was so broken and unsatisfactory that the parents feared for the life of their child. One, a girl aged thirteen years, from the ordinary stature of a girl of that age had suddenly shot up into a tall, thin figure, rapidly losing her power of study, becoming greatly emaciated; in short, showing every symptom as if the waste would speedily cause death. Owing to my absence from the city she had been under the care of another practitioner, and so far as could be learned, every proper means had been employed in the hope of toning her system and restoring her nerve power. But after the lapse of several weeks, upon my return she was brought to me in a pitiful condition. While she appeared to have partially regained her appetite, not the slightest result had been obtained in the control of the convulsive movement. She was so constantly jerked in every muscle that she was unable to stand or walk without support. In eating great care was needed to prevent biting the tongue and choking. From this condition and her sleeplessness due to the convulsive motions it became imperatively necessary to procure rest at once. My prescription was:

Chloral.....	3ij
Ext. cimicifugae fld.....	ʒ ʒij
Elixir simplicis.....	ʒ ʒij

Sig.: One dram every three hours.

She was directed to take the first two or three doses at intervals of one, then two hours, in the hope of procuring sleep. She did not present herself again for some four weeks, and then every symptom of chorea had disappeared. She was gaining in flesh and in every way was markedly improved. I was informed that after several doses on the first day and night sleep

was obtained. Next day she showed the advantage resulting from this refreshing sleep in renewed appetite, almost entire disappearance of the movements; in short, from that time her progress to health was rapid.

In the treatment of a large number of cases of this affection, while I have met with a number which were rather stubborn in yielding, this was the worst, but at the same time the one which yielded most readily to the positive treatment instituted. My usual plan is to ascertain the cause and remove it if possible; then build up, which is generally needed, and employ the cimicifuga in positive doses. The chloral is added only when the movements continue in spite of treatment.

A similar case occurred in my practice many years ago and before I had learned the use of chloral. In this, it being a sequel of rheumatism, the child became so much exhausted from loss of sleep, inability to take food, etc., that he appeared in a dying state. Feeling that this would be the result, I administered morphia in rather large doses till sleep was induced. I confess that I watched him anxiously, and was much relieved after several hours to find him awake and really improved.

Cigarette-smoking in a boy of nine years was undoubtedly the cause in a case which was brought to my clinic, and here the cimicifuga combined with syrup of hypophosphites soon relieved the symptoms. Of course the child was carefully watched to prevent his continuance of his foolish habit.

One instance of recurring chorea was due to intestinal trouble induced by the most ridiculous indulgence of the child at the table. He was permitted to eat to excess of any article he fancied. This, although the danger of it was laid before the parents, was repeated again and again, apparently to show the determination of one care-taker to have her own way. Here some form of pepsin rarely failed to aid the other treatment, but occasionally an attack would prove obstinate. The child showed to a surprising degree, after several attacks with their accompanying an-

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noyances, a good sense in agreeing not to indulge in this way, and no more attacks followed.

A great source of difficulty in curing these cases is the tendency on the part of parents to try each new treatment they hear of; to believe the disease to be wholly the result of worms in the alimentary canal, and by the use of quack nostrums, vermifuges and the like, to delay the progress to health and even to make it worse.

Always demand the most earnest attention to your treatment and suggestions;

promise a cure if these are carried out, but do not promise a complete cure in too short a time to allow of the tonic and antispasmodic effects of the remedies being fully obtained. When the movements cease continue the remedies in lessened doses for a time, lest a return of the symptoms produce a loss of confidence.

I do not pretend in this brief paper to enumerate the other remedies which often are found of value. Every physician must act as the symptoms indicate and be guided by the results of the remedies.

COMMUNICATIONS.

A CASE OF ATAXIC PARAPLEGIA.*

THEODORE DILLER,† M.D., PITTSBURG, PA.

The symptoms which this man presents are a mingling of those seen in locomotor ataxia and primary spastic paraplegia (lateral sclerosis). The affection corresponds to neither of these diseases alone, for some symptoms are added and others are absent in the clinical picture of each. But on theoretical or *a priori* grounds one would expect to find, when the parts affected in locomotor ataxia (posterior columns of cord) and primary spastic paraplegia (lateral columns) are both diseased, that there would result a symptom complex which would, so to speak, strike an average between the symptomatology of these two affections. Conversely, such an "average" symptom complex would lead us to look for diseased condition in both lateral and posterior columns of the cord. Reasoning on this ground, one would of course expect the "average" of symptoms to vary according as there existed predominance of disease in lateral or posterior columns. As a matter of fact, pathology shows this *a priori* reasoning to be correct. Very often it is difficult to say just what the pathological condition is which causes the symptom complex under consideration. Some of these cases are nothing more than cases of locomotor ataxia in which the

morbid process has overleaped the confines of the posterior columns and invaded the lateral columns. In other cases a transverse or diffuse myelitis is the underlying pathological condition present.

These cases of ataxic paraplegia have been frequently described by Westphal, Ormerod, Strumpel, Gowers, Dana, Grasset and others and are now well recognized, at least clinically. They are, however, somewhat uncommon, and I believe that the notes of this case will not be without interest to the Fellows of the Academy.

William C. applied for treatment at the Pittsburgh Free Dispensary last January. He is forty-four years old; married; pud-dler; denies syphilis; uses a great deal of tobacco.

Several weeks before applying for treatment he suffered some pains (not severe) running across the belly and down the thighs and legs to the toes. There was some numbness and tingling of these parts. He has lost much strength in his legs (it is for this that he seeks relief). Knee-jerks are normal or perhaps slightly exaggerated. Distinct locomotor and static ataxia present. Gait is perhaps slightly spastic. Pupils unequal, irregular in outline; respond to both light and accommodation, though very sluggishly. There is marked diminution of strength in legs; no loss of strength in arms. No

* Case reported and patient presented at meeting of Pittsburgh Academy of Medicine October 29, 1894.

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atrophy. Cincture sensation and slight numbness of legs present. Sexual and vesical functions unimpaired.

Dr. Wishert discovered partial absorption of lens of left eye (accounting for a quivering of iris which is present).

I lost sight of the man during the summer. He returned to the dispensary a couple of weeks ago, his condition very little changed, except that his knee-jerks are not quite so active. He tells me that he suffered some bladder trouble during the summer necessitating catheterization, for which he was treated for several weeks at the Allegheny General Hospital.

The treatment has consisted in large doses of iodide of potash (5j t.d.) and general faradization. He states he is some better, but he has not been under observation long enough to note results.

The ataxia, cincture sensation, pains in legs with disordered sensation and bladder trouble are suggestive of locomotor ataxia. The preservation of knee-jerks, the very considerable loss of power in the legs and the slightly spastic gait

argue against this diagnosis. The girdle sensation and leg pains are not prominent symptoms, and it must be remembered that the patient himself regards the loss of power in his legs as the dominant symptom.

So as we have here a symptom complex representing an "average" between those of locomotor ataxia and primary spastic paraplegia, we may fairly conclude that both the posterior and lateral columns of the cord are involved and that clinically the case is one of ataxic paraplegia.

Whether the case is really an atypical case of locomotor ataxia or whether the symptoms depend upon some form of transverse or diffuse myelitis it would, I think, be difficult to say. I am inclined to favor the first-named view, principally from the fact that atrophy is absent.

So far as treatment is concerned, the diagnostic distinction between locomotor ataxia and ataxic paraplegia is not of very great moment. Yet it has been said that the last-named affection can be more favorably influenced by faradism and electricity than the first named.

TRANSLATIONS.

PULSATING TUMORS OF THE POPLITEAL SPACE.*

TRANSLATED FOR THE MEDICAL AND SURGICAL REPORTER.†

There recently entered the hospital a patient with a tumor of the left popliteal space which presented visible and distinct pulsations. My first impression from the site and the pulsation was that it was a popliteal aneurism, and I should say that all who saw him with me were of that opinion. But when about to exhibit him to you I began to reflect and found myself in doubt. I returned to the patient and examined him again. I then came to the resolute conclusion that it was no popliteal aneurism at all. I shall now present to you the reasons which led me to this diagnosis.

First of all, what are the essential characteristics of an arterial aneurism? The blood, driven forward by the heart-beat, reaches the aneurismal sac; the wave is the

result of the pulsation and its distention. Thus there are at the same time an elevation and an expansion of the tumor. In the second place, when the blood penetrates into the sac through a narrow orifice there is in consequence a murmur which in certain situations, as in the popliteal space, for example, may be doubtful or indistinct. Finally, if the aneurism be arterio-venous, and even in the ordinary variety, there is one well-known and characteristic sign, the thrill. Another characteristic, yet one of less importance, is the condition of the pulse below the aneurism, which is slower or less forcible than that of the opposite side.

A true aneurism is either entirely or in part reducible, either by compression applied directly to the aneurismal sac or above or below the sac on the blood-vessel. Now, it is not to be denied that here in this case there are distinct pulsations, but

* A clinical lecture by Prof. Tillaux at the Charité Hospital, Paris.

† Translated from the *Gazzetta degli Ospedali*, No. 96, 1894, by F. H. Pritchard, M.D.

that does not constitute expansion, which is absolutely lacking, and the greatest force of the pulsations, you will observe, is exactly in the middle of the tumor; so if one place his fingers along the margins the pulsation is not noticed. This last feature is a little difficult of comprehension, but it is the expression of the conclusion that there is in this case no expansion, for then it should be palpable in all directions and at all points. And again, we have not succeeded, even with the most careful examination, in discovering the least trace of a souffle, and this was one of the first signs which led me to doubt the diagnosis. The murmur is not present—I can guarantee it—therefore we have an aneurism in which there is neither expansion nor murmur. The pulse in the posterior tibial artery, tried with the finger, seems less strong than that of the opposite side, but the sphygmograph reveals nothing of importance. Therefore this evident diminution of the pulse-beat in force is the only sign of this tumor being an aneurism. I now press upon the tumor and I also invite you to try it, and I find that it is impossible to obtain the slightest decrease in volume, whatever be the position of the limb. On compressing the femoral artery the tumor no longer pulsates, while its original size persists without its decreasing the least. It has a solid feel, but more resistant than that of an aneurism. Place your finger upon the tumor and you will perceive the pulsation; press upon it and it diminishes in force; press still more and the tumor, compressing the blood-vessel, causes the pulsation to disappear. But, you may interpose, an aneurism may be more or less filled with coagula, and from this the tumor is not to be reduced in size and the murmur absent. But the patient has only suffered from pains for six months and for two months has noticed the development of a tumor. The principal sign upon which I base my diagnosis is this: I declare that this is neither an aneurism of the popliteal artery, a tumor attached to the artery, nor an aneurismal sac filled with coagula, and that because if you place your finger upon the growth you will find it absolutely limited and displaceable toward the joint vertically, and that not only when the leg is flexed but also when it is completely extended. The artery remains

tense like a cord, and even then the tumor is movable not only vertically but also transversely. It slides upon the artery and is very movable, so that a movement of one or two centimeters may be imparted to it. I do not hesitate to state that we have here a tumor in contact with the artery, but not attached to it.

What is this tumor? Is it a cyst? Several objections might be offered to this hypothesis. Firstly, the tumor is in the middle line, which does not hold true of cysts originating in the tendons and their sheaths. Median cysts communicate with the joint, in which case they would lift the artery instead of, as here, being lifted. I had thought that possibly it might have been a tumor of the sciatic nerve on account of the patient having experienced pain long before he noticed a growth. This was not merely a sense of fatigue nor formication, but an actual pain in the lower portion of the leg on its external aspect as well as in the dorsum of the foot along the musculo-cutaneous branches of the popliteal portion of the sciatic nerve. At the same time you will notice that the calf of his leg on the affected side is about one centimeter larger than that of the sound side. Still, there are numerous objections to accepting this view. The growth is in the middle and outside of the course of this branch of the sciatic nerve, and though Virchow has called attention to tumors implanted laterally upon nerves and even I have allowed myself to be led on by this idea, I dropped it, as the tumor is still movable even when the limb is in extension, when the nervo-vascular fascia of the popliteal space is tense. It is beyond a doubt that it is connected with the popliteal branch of this important nerve, yet only by contiguity, for how could we otherwise explain the painfulness?

Possibly it is an enlarged lymphatic gland. I do not believe it, but I cannot affirm it, for this lymphatic must be in the depths of the space. Of what character is it, then? But such a view is untenable, for patient is vigorous and robust.

I hold that it is a fibrome, and considering its rapid course it may be a fibrosarcoma; this the histological examination will settle. Still, in the mean time I can state that it is a hard, solid, mobile tumor of neither vascular nor nervous origin, but probably lymphatic.

What is to be done with it? If it were an aneurism I should not try operative measures before having employed others more simple, as compression. But the patient suffers, he is unable to follow his trade, and the growth is in a dangerous location. With care not to injure the external saphenous vein I incise the skin, the cellular tissue and aponeurosis after having applied Esmarch's bandage. I remove the tumor from its surroundings with Museux's forceps and a small spatula.

We have now operated on our patient in the following manner: Having applied Esmarch's bandage, I examined again and felt that the tumor had not changed in volume or consistence, which was another point in favor of its not being an aneurism containing liquid. After having made an incision I found the superficial veins very much overfilled and distended with blood, they being compressed by the elastic fascia. The popliteal branch of the sciatic nerve was seen to cross the tumor; this was liberated and drawn to one side. The growth then came into view and still was found movable. At first it appeared possible to enucleate it, but I at once saw that it was connected with the artery both above and below, so that I decided to extirpate it by Purnamm's method, *i.e.*, after ligation above and below the tumor. No other ligature was necessary. In the depth of the incision you see the popliteal vein distended and greatly swollen. The growth, which is of the size of a pigeon's egg, I now cut through lengthwise, as it is oblong and you will notice that it consists of concentric layers of coagula, to use Broca's expression; no trace, on the contrary, of active clots and all dense, white and fibrinous, while the sac itself is not completely full. We have therefore here a case of spontaneous cure of an aneurism.

I now wish to study with you this case which is so full of interest. I absolutely affirmed at first that it was not an aneurism, though I myself at first sight thought we had an aneurism to deal with, from the totality of the symptoms. Then I told you that it was a tumor in the vicinity of the vessel, but which had not developed at its expense. I therefore have been mistaken. What is the cause of this error? In the first part of my lecture I stated that it was not an aneurism containing liquid, for there is none of the characteristic symptoms, expansion, souffle

nor reducibility, and indeed this tumor presented none of these symptoms. But then I remarked, is it possibly not an aneurism full of coagula? I also denied that. If you consult Broca's work you will read the following:

"On sait qu'à l'état de simplicité, l'aneurysme est une tumeur molle, pulsatile, complètement reducible, donnant lieu à un bruit de souffle plus ou moins fort. Ces caractères peuvent être atténués, masqués ou même effacés par la présence de caillots fibrineux. La tumeur peut devenir plus ou moins dure et acquérir même une fermeté comparable à celle d'une tumeur fibrineuse. On ne sent qu'un soulèvement obscur, et si la tumeur est placée sur le trajet d'une artère profonde, comme la poplitée, le chirurgien est quelquefois fort embarrassé."

These exceptions of Broca exactly correspond to those of our case, with the difference that, only being able to formulate a diagnosis from the symptoms, I did not hesitate to eliminate aneurism, for the artery being distended by extension of the articulation I was able to move the tumor about in the depths of the popliteal space. And this symptom being present I could not do otherwise than diagnose a solid tumor independent of the artery, though possibly it might be attached to it.

It is a mistake which is often made. But how could this mobility mislead us? The tumor was not as closely in the median line as I first had thought. The artery had undergone slight lateral displacement, so that the growth had been carried somewhat outward from elongation of the vessel, so that on extension of the leg it did not become fixed. Well, suppose that we had made a correct diagnosis: should we have treated it otherwise? Evidently not. Any other method would have had as its object the formation of coagula in the aneurismal sac, and this object may be said to have been already attained. We have therefore done well to operate. The patient will do well and in a month he will be able to leave the hospital completely cured.

LANDLADY—That snow-storm you have painted is wonderfully realistic! Daub-leigh—It must be. A tramp got into my studio one day, caught sight of the picture, and unconsciously put on my fur overcoat before he went out.—*Tit-Bits.*

THERAPEUTIC SUGGESTIONS FROM FOREIGN JOURNALS.*

SALT-WATER BATHS IN OSTEOMALACIA.

Dr. Z. Pelczar (*La Semaine Médicale*, No. 61, 1894) has obtained excellent results, with baths, in a solution of common salt and water, in eleven cases of women in an advanced stage of osteomalacia. They ranged in age from twenty-five to forty-six years, multiparæ, in whom the affection had begun after a confinement and dated from two to eight years. The beginning, the chronic course, the pains and the deformations of the bones as well as the cutaneous hyperesthesia, exaggeration of the reflexes, the paretic state of the lower extremities, etc., without any cerebral or spinal symptoms, all permitted him to diagnose the disease with a certainty. In all the cases treatment consisted simply of salt-water baths containing from six to sixteen kilograms of common salt, according to the strength of the patient. They were at a temperature of 34° to 37° C., lasted from fifteen to thirty minutes and were repeated every day or at longer intervals, according to the tolerance of the patient. Besides this lime-water was administered in milk. After several baths they experienced relief; twentybaths sufficed to free them from their pains and to render their movements easier. At the end of four to eight weeks a notable amelioration was to be seen, and in several cases the osseous deformations had partly disappeared. He does not attempt to decide if the cure be lasting.

BROMOFORM IN MENTAL DISEASES.

Dr. Ponticaccia (*Wiener Medizinische Presse*, No. 41, 1894) recommends bromoform very highly in acute maniacal states. He begins the remedy with fifteen drops a day, which are divided into hourly doses, and increases it every day by five drops until from twenty to fifty drops are given a day. Employed in this manner it causes no disagreeable after-effects and in general does not influence the health beyond a slight diarrhœa which is easily controlled by opium. Its sedative action is always prompt and decisive, so that it need not be administered for more than fourteen consecutive days. He relates eight cases, accompanied by violet mani-

acal attacks, where the remedy gave him prompt results. The first one may be presented in full as an illustration of its action. A merchant of forty-one years and a habitual drinker was seized with a violent attack of delirium tremens, with great restlessness which persisted for twenty-four hours in spite of large doses of chloral hydrate. Therefore in the evening twenty-five drops of bromoform were prescribed, and in half an hour the patient was in a deep sleep with quiet and regular respiration, full and heavy pulse, normal heart's action and perspiring slightly. The following morning he awakened quietly with complete consciousness and only complained of slight headache and a feeling of heaviness in his head. In the course of the day he became still quieter. This improvement continued so that the following day there was no sign of restlessness nor at his discharge from the institution, six days later. From his experience the author concludes that the remedy in progressively increasing doses, twenty to fifty drops a day, in patients with delirium in combination with intense maniacal excitement, exerts a marked sedative action; that it does not act the same in all mental diseases, but it influences the symptoms, excitement and delirium. On the contrary, its action varies more according to the duration of the disease than its intensity, for it has a very favorable action in acute conditions and a less decided one in those having lasted for several months.

INTESTINAL ANTISEPSIS.

Prof. H. Huchard (*La Semaine Médicale*, No. 61, 1894) recommends as an intestinal antiseptic the following powder:

Benzo-naphthol.....	25	o	5vj
Powdered charcoal.....	15	o	3iv
Pancreatine.....	5	o	3¼

Sufficient for fifty powders. Four to six a day.

TERPINE IN CHRONIC BRONCHITIS.

Dr. Delmis (*Gazette des Hôpitaux*, No. 118, 1894) has employed terpine in chronic bronchitis, bronchiectasia and emphysema, as well as in phthisis, with successful results. It is best given in a pill of ten cgms., three to ten a day.

* In charge of the translator, F. H. Pritchard, M.D.

ELECTROLYSIS IN CHRONIC GONORRHEA
IN WOMEN.

Dr. Barthélemy (*Annales de Dermatologie*, Nos. 8, 9, 1894) has obtained good results with electrolysis in the treatment of gonorrhœa in women in cases which were even refractory to repeated curetting, as well as in chronic urethritis. He employs twenty Léclanché cells and applies from fifteen to twenty milliamperes for twenty-five to fifty seconds to the urethra, parurethral crypts and Bartholini's glands. In the uterus he allows forty to fifty milliamperes to act for three to four minutes. The positive pole is used as a cauterizant, while the negative is applied to the abdomen. In the uterus an ordinary uterine sound may be used, in the crypts a thin platinum wire. A sitting should be given every sixth day and the treatment be continued up to two months. He has never noticed any disagreeable results.

COCAINE TO SUPPRESS THE SECRETION
OF MILK.

Dr. Iore (*Lo Sperimentale*, No. 30, 1894) having observed with other gynecologists that when cocaine is employed in painful fissures of the nipple it had the inconvenience of diminishing the lacteal secretion, concluded to employ it in those cases in which it was necessary to suppress this secretion completely. He uses a five per cent. solution in the following formula:

Muriate cocaine.....	5 0	5j4
Distilled water.....	{	5j5 gttis xxx
Glycerine.....	{	5j5 gttis xxx

This solution is applied by means of a camel's-hair brush five or six times a day to the two nipples. The milk will be suppressed in two to six days. No inconvenience followed from its use on account of the small amount of surface to which it was applied. The cocaine prevents erection of the nipple, which according to Iore favors and maintains the lacteal secretion. [I have observed that the administration of the fluid extract of coca to nursing women will decrease the milk secretion. The quantity rises again to normal on discontinuing the drug.—*Trans.*]

TREATMENT OF ACUTE YELLOW ATROPHY
OF THE LIVER.

Dr. X. Arsosan (*Norsk Magazin for Lægevidenskaben*, No. 10, 1894) communi-

cates a case of acute yellow atrophy of the liver which he treated with success. Since the anatomico-pathological term acute yellow atrophy has been changed by bacteriologists to grave infectious icterus, the modes of its treatment have also altered, and the antiseptic method is regarded by Chauffard as the most promising. The writer proceeded as follows:

1. Absolute milk diet in order to spare the kidneys and facilitate elimination of the toxines.

2. Administration of the following intestinal antiseptic:

Sulphate quinine.....	{	5j5 gttis
Beta-naphthol.....		
Powdered charcoal...		

To be put up in capsules. Two capsules four times a day.

3. Hypodermic injections of carbolic acid, one-half a syringe of a 2 per cent. solution daily.

4. Symptomatic employment of tonics, as alcohol, quinine, etc.

The injections of carbolic acid are especially indicated in violent delirium and high temperature, yet they should not be given during coma and prostration, low temperatures nor when there is a pronounced inclination to subcutaneous hemorrhages.

THYMOL AS AN ANTHELMINTIC.

In the *Hospitals-Tidende*, No. 41, 1894, thymol is spoken highly of in the treatment of intestinal parasites and in doses of one-half to two grams (grs. vijss-xxx). While the male fern will be generally preferred in tapeworms, thymol is the best remedy in pinworms when given in a rectal injection.

ICE IN TACHYCARDIA.

Dr. E. Isnel (*Revue Internationale de Medecin*, No. 18, 1894) claims that local application of an ice-bag to the precordium in tachycardia will increase the force of the heart-beat by acting directly upon the myocardium, augment the blood pressure, diminish the number of pulsations and cause irregularities in the heart's rhythm to disappear. Finally, it favors pulmonary circulation and respiration. [A recent English observer has reported an attack of tachycardia aborted by belladonna internally and galvanization of the pneumogastric nerve. A mustard plaster to the epigastrium with belladonna in-

ternally I have found serviceable in one case.—*Trans.*]

DENTAL NEURALGIA OF PREGNANT WOMEN.

Dr. Graetzer (*La Semaine Médicale*, No. 57, 1894) praises, in the dental neuralgic toothache of pregnancy, the following formula:

Acetanillid..... 0 | 25 grs. iv
Phenacetine..... 0 | 50 grs. viij

Sufficient for one powder. Make six such. One powder three times a day.

THE GALVANIC BRUSH IN SCIATICA.

Dr. Witkowski (*Muenchener Medizinische Wochenschrift*, No. 41, 1894) has obtained very good results with the galvanic brush in sciatica, which instrument he believes to be far superior to the ordinarily employed faradic brush in intensity of action, exactness of dosage and therapeutic efficacy. The patient is placed upon the abdomen and the skin over the sciatic nerve, in its whole extent from its point of exit to the terminal ramifications, is rubbed with the cathode, to which the slightly moistened brush is attached, for about five minutes, with a current of quite high intensity. The electrode is permitted to rest at times upon the painful points. These applications are repeated daily or every two days. The results, he claims, are actually brilliant even in inveterate cases which have resisted other methods of treatment. In some few cases it was necessary also to employ massage and stretching of the nerve. This latter is done by placing the patient upon the back and flexing the thigh forcibly upon the pelvis. The procedure is at first painful, but a notable amelioration is seen after a few trials. Also in tabes dorsalis the galvanic brush has yielded him excellent symptomatic results.

THE DANGERS OF THE IODIDES IN PHTHISIS.

Dr. V. Vitvitzky (*La Semaine Médicale*, No. 57, 1894), of Charkoff, Russia, has observed a case which goes to demonstrate the possible dangers of the iodides in the treatment of pulmonary tuberculosis. A woman of twenty years suffered from a cough with tickling in the larynx and painfulness on swallowing and presented suspicious signs in the apices of both

lungs. Yet she had had no fever and her general health was excellent. A laryngoscopic examination showed the larynx to be greatly congested and the vocal cords ulcerated. As they were justly thought to be syphilitic, the iodide of ammonium was prescribed in a dose of two grams a day. After eight days of this treatment a manifest aggravation was noticed. The cough increased, her temperature rose, both râles and an intense bronchitic souffle were to be heard in the apices; bacilli were discovered in the sputa, which up to then had been without trace of them, and a complete picture of galloping consumption developed which was soon followed by death. As is known, a certain number of the symptoms of iodism are localized in the lungs and are expressed by cough, muco-serous expectoration and pleuritic pains. An abundant transudation of serum has been found in the lungs of dogs in which subcutaneous injections of a solution of iodine and the iodide of potash had been made. These facts go to prove that in certain cases of pulmonary tuberculosis the iodides will bring about an unfavorable congestion which may be followed by softening of the tubercles. [In doubtful cases it was suggested a few years ago to administer the iodide to develop the hidden foci of pulmonary tuberculosis if they were present.—*Trans.*]

PERMANGANATE OF POTASH IN POISONING BY PHOSPHORUS.

Dr. Kelemen (*La Semaine Médicale*, No. 57, 1894) was called to a woman two hours and a half after she had drunk a cup of water containing the heads of four boxes of matches. She was conscious, pale, with an intense pain in her stomach and a rapid pulse. He administered sulphate of copper as an emetic and followed this by a 1 per cent. solution of permanganate of potash, she ingesting a quart and a half in two hours and a pint in the rest of the day. The next day she was better but complained of severe pains in her stomach and she had vomited three times. From the fourth day the pains and vomiting ceased and in a few weeks she was well.

TEACHER—What is the passive mood of the verb “to work?” Johnny—To loaf. —*Chicago Record.*

THE MEDICAL AND SURGICAL REPORTER

ISSUED EVERY SATURDAY

Address all communications to P. O. Box 843, Philadelphia, Pa.

HAROLD H. KYNETT, A.M., M.D.
Editor.

PENFIELD PUBLISHING COMPANY
Publishers.

Editorial Offices, 1026 Arch Street, Philadelphia, Pa.

Entered as second-class matter at Asbury Park, N. J.

TERMS:—Three Dollars a year in advance. Sent four months on trial for \$1.00.

REMITTANCES should be made payable only to the Publishers, and should be made by Money Order or Registered Letter.

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SATURDAY, DECEMBER 8, 1894.

EDITORIAL.

CONSULTATIONS IN FRACTURE CASES.

Perhaps, taken as a whole, there is no class of traumatisms which are apparently so simple and yet are oftener attended with unsatisfactory results than fractures of the extremities.

The average graduate in medicine on his entrance into general practice is apt to be engrossed solely with the nature of the bone lesion, the quality of the fracture—whether simple, compound or multiple, oblique, transverse, etc.—and unless he has had surgical experience or has been specially warned, his efforts will be primarily directed toward securing immediate reposition and immobilization of the fragments. The possibility of ankylosis following, or injuries of the nerves, the blood-trunks or muscles he may entirely overlook. He adjusts the dressings, splints, bandages or apparatus with an injunction that if severe pain is experienced morphine should be freely given. But the tight bandage has gotten in its deadly work and gangrene follows in the way of peripheral sloughs, or perchance the whole limb is doomed. The patient

may recover without any marked deformity, but the limb is paralyzed or a joint is hopelessly locked together by ankylosis.

It is not generally known that with a limb, as with the whole body, violent concentrated force may kill it outright while there are no marked traces of mutilation externally visible to the eye.

The experienced surgeon in serious traumatisms will recognize this in an instant and will predict results accordingly. But with one who has not had opportunities to examine many of such cases, the chances are that he will commit the fatal error of immediately splinting; and when the black, cold foot or hand proclaims the death of the part and that mortification has commenced, he is invariably charged with having destroyed the limb.

What shall one do in the average case of fracture in order to avoid error? Clearly his first move should be to secure the aid of a consultant. He should do this to protect his own reputation, as well as

to fulfill his own obligation to his patient.

The sacrifice of a limb through the ignorance or carelessness of the surgical attendant is indeed a very serious matter, which the profession as well as the courts is always ready to condemn and punish. For however harsh it may seem to the unfortunate defendant, it should never be forgotten that when expert knowledge is called for, the testimony submitted should be solely in the interest of truth and justice, regardless of who is the sufferer in consequence.

These reflections have been suggested by the report of an interesting malpractice suit lately held in Ireland and published in the *Medical Times and Hospital Gazette* (November 17, 1894).

Dr. Thomas O'Brian was the defendant in the city of Cork assizes. The plaintiff was a young, able-bodied groom who had been thrown from a horse and sustained a fracture of the clavicle. Soon after dressings had been applied gangrene of the arm set in, and a shoulder-joint amputation had to be performed. Drs.

Walsh and Hueston, of that city, on the stand stated that in their opinion the gangrene supervened in consequence of too tight bandaging; while Surgeon Wheeler, of Dublin, after hearing the testimony, testified that he believed that the gangrene was due to an injury of the subclavian vein at the time of accident. Mr. Nyles, of the Richmond Hospital, employed by the plaintiff, said that in the whole history of surgery rupture of the subclavian vein as a result of fracture had never occurred.

The plaintiff sued for £1,000, and it appears that the jury was satisfied that the doctor was blamable, for they brought in a verdict against him for £175 damages.

We do not learn whether Dr. O'Brian had any associate with him in the early attendance on the case.

If a practitioner fears that he will suffer in prestige or begrudges a consultation fee to a competent *confrère*, then if his case goes badly he should be expected to solely bear the consequences; for the profession is under no obligation to shield him from the full rigor of the law.

ABSTRACTS.

ETIOLOGY AND PROPHYLAXIS OF DIPHTHERIA.

Dr. Becker, of Toledo, Ohio, related the following:

Loeffler, from Greifswald in Germany, says that diphtheria is produced by a specific bacillus, whose importance is not doubted any more by anybody. As diphtheria we can consider that affection only which is produced by the Loeffler bacillus, excluding all similar affections which are caused by other microorganisms. In fact, we often find diseases of the upper air passages which give the same picture as genuine diphtheria, but which are caused by an infection of streptococci, staphylococci or pneumococci and which, like the genuine diphtheria, can take a benign or malignant course. The differentiation in diagnosis can only be made by bacteriological examination, and all the statistics of

diphtheria cannot have any value as long as this differentiation is not strictly observed.

The course of an epidemic diphtheria depends on different factors: (1) on the quantity and the virulence of the diphtheritic bacilli; (2) on mixed infections by which the virulence of the bacilli is increased or the organism weakened by the absorption of the products of secretion; (3) on the individual predisposition.

The bacillus of diphtheria is often found in the pharynx or in the nose of healthy individuals, its presence not producing any pathologic symptoms. It produces a disease only in those cases in which it is fixed on the mucous membranes. Lesions of the mucous membrane facilitate this fixation, and atmospheric

changes, moist air, etc., seem to favor the development of the disease. In the majority of the cases diphtheria is directly transmitted by contact, by cough, kisses, by hands which are soiled with the fresh secretion, but often also by food, linen, etc., even a long time after the infection.

The patient must be considered as dangerous to others as long as bacilli can be found upon the mucous membrane. Usually they disappear a short time after the healing of the local process, while in certain cases pathogenic bacilli are found in the pharynx and the nose after weeks. Enveloped in organic substances and with the exclusion of light the bacillus can retain its activity for months outside of the organism. Dirt, moist and dark houses therefore favorably affect the conservation of the bacilli and the spreading of the disease. The most favorable condition for such a spreading is found in accumulations of susceptible individuals, as in schools, etc.

As means of prophylaxis are especially recommended:

1. Cleanliness, dryness, ventilation and light of residences.

2. Hygiene of the mouth and nose; repeated gargarisms with solutions of chlorid of sodium or bicarbonate of soda; cleanliness of teeth, extraction of diseased teeth; removal of hypertrophied tonsils.

3. Cold spongings of the neck.

Every suspicious case should bacteriologically be examined. Every practitioner should receive culture media from drug stores or health offices to be simply inoculated and sent to the bacteriologic station. The report of all cases of genuine diphtheria, likewise of all suspicious cases, should be obligatory, and all the diphtheritic patients should be isolated. To possibly prevent the spreading of pathogenic germs, local anti-parasitic treatment should be resorted to if the locality of the disease allows it.

The most effective preventive against the spreading of diphtheria is the prophylactic inoculation of those persons surrounding the patient, especially of the children. Numerous experiments have proven the harmlessness of Behring's curative serum (Heilserum), and its effect as a preventive remedy should be tested liberally in schools and families. Disinfection of the sick-room and of all things which have been used by the patient

should always be done. Convalescents from diphtheria should not come in contact with healthy people before the absence of the bacillus is proven by bacteriologic examination. In epidemics the laity should be enlightened by public instruction and publications.

Representing the French Committee, Professor Roux, from Paris, offered the following thesis:

1. Diphtheria is a contagious disease; the report of the cases must be obligatory.

2. Diphtheritic patients should be isolated.

3. The health officers have to provide for the proper disinfection of rooms infected by diphtheritic patients, of their clothes, linen and beddings; in short, of everything that has been used by the patients, toys included. During the sickness the soiled linen, etc., must be disinfected before given out for washing.

4. Carriages, etc., used for the transportation of diphtheritic patients must be disinfected after each use.

5. Children who have had diphtheria should be kept from school until the physician has stated the cure and permitted the return to school.

6. When a pupil of a certain school is taken sick with diphtheria, the rest of the children should be under the observation of a physician for some time. All suspicious cases of angina should be excluded from school immediately. Special care is required for the sisters and brothers of a patient.

Besides these rules, to be effected by official ordinance, the following principles should be generally adopted:

1. In order to employ an effective treatment of diphtheria the diagnosis must be made early. The beginning of the disease is insidious in many cases, and it would be overlooked less often by frequently repeated inspection of the child's pharynx. Mothers should make this inspection daily and the children be made used to it from an early age.

2. An early and sure diagnosis of diphtheria can only be made by bacteriologic examination, which therefore should be practiced by every physician.

3. Our knowledge concerning the effect of the anti-diphtheritic serum is of a kind at present that its prophylactic use can be recommended for children in families with a diphtheritic case.—*The Journal.*

PREVENTION OF DIPHTHERIA FROM THE STANDPOINT OF THE HEALTH OFFICER.*

U. O. B. WINGATE, M.D., M.M.S.S.

In presenting this short paper I do not claim to offer anything original or new, but merely to give the results of my observations and suggest points that may be profitably discussed.

Prevalence.—The widespread and variable prevalence of diphtheria is of great interest to the health officer. Rural statistics avail us nothing in this country, as a rule, but statistics of death from this disease in our larger cities are fairly reliable. There is one feature, however, that has not yet generally entered into our statistics that may modify them somewhat, that is, the prevalence of croup and what proportion of cases of so-called membranous croup are cases of diphtheria. The recent researches of Dr. H. M. Biggs, of New York, which show that nearly 80 per cent. of cases of so-called membranous croup were found to be cases of true diphtheria by a bacteriologic examination, are of great importance to the health officer and demand a most earnest and careful consideration. I believe all cases of croup presenting exudation in the throat should be treated by the health officer as true diphtheria, unless a bacteriologic examination proves it to be non-diphtheritic. This would seem to be, in our present state of knowledge, the only safe procedure, for certainly if there be a doubt in regard to the care and treatment of infectious diseases the public should have the benefit of it.

The following is a table showing the per cent. of deaths from diphtheria on the estimated population during the years 1892 and 1893, as officially received from a few of our larger cities in this country:

New York.....	1892	0.08	1893	0.10
Chicago	"	0.07	"	0.06
Philadelphia.....	"	0.13	"	0.08
Brooklyn.....	"	0.08	"	0.06
St. Louis.....	"	0.04	"	0.04
Boston.....	"	0.09	"	0.10
Baltimore.....	"	0.08	"	0.04
San Francisco.....	"	0.07	"	0.05
Cincinnati.....	"	0.09	"	0.05
Buffalo.....	"	0.06	"	0.05
Cleveland.....	"	0.07	"	0.04
Washington.....	"	0.07	"	0.04
Pittsburg.....	"	0.11	"	0.06
Milwaukee.....	"	0.16	"	0.08
New Orleans.....	"	0.02	"	0.03

*Read in the Section on State Medicine, at the Forty-fifth Annual Meeting of the American Medical Association, held at San Francisco, June 5-8, 1894.

It will be observed by this table that in 1892 the largest death-rate from this disease in fifteen of our largest cities was in Milwaukee, Philadelphia and Pittsburg, being 0.16, 0.13 and 0.11 respectively; and the smallest rate for the same year was in New Orleans, St. Louis and Buffalo, being 0.02, 0.04 and 0.06 respectively. While in 1893 the largest rate was in New York, Boston and Milwaukee, being 0.10, 0.10 and 0.08 respectively; and the smallest rate was in New Orleans, Washington, Cleveland, Baltimore and St. Louis, being 0.03, 0.04, 0.04, 0.04 and 0.04 respectively. These figures are approximately correct.

Etiology.—That the Klebs-Loeffler bacillus and its products cause all the pathologic phenomena connected with diphtheria there seems to be no reasonable doubt at the present time, but the origin of this bacillus and its habits are matters far from being settled, and these questions bear a very important relation to the etiology of this disease. Whether the bacillus originates *de novo*, or whether it is a product of evolution from other forms of life, whether it can live in the soil in its true state or is capable of taking on a form of existence non-pathogenic or saprophytic for an indefinite period of time, and then under certain favorable circumstances is capable of developing into pathogenic qualities, are questions yet to be solved. Quite an extensive experience with this disease, both as a practicing physician and as a health officer in a city which at times has led all other cities in this country in the large number of cases of diphtheria, leads me to observe that it is favored by cold, damp, cloudy weather; that it is more active in winter than in summer; that it is favored by damp, dark cellars and poorly drained soil; that in certain conditions of soil and weather it seems to remain dormant for an indefinite period of time, and under more favorable conditions, such as cold, cloudy, damp but not too wet weather, it becomes active; that sunlight, good air, good drainage and plenty of snow in its season very materially lessen its ravages. There is much, however, to be learned concerning the true nature and habits of this bacillus, and

this is a difficult matter to study, for nature's laboratory, in which these bacilli operate, is far different from any constructed by man.

That defective plumbing may be an indirect cause there seems to be no reason to doubt, but I have found no evidence that the bacillus is carried in the escaping sewer air; it is more probable that the effect of inhaling the sewer air debilitates the system and renders the powers of resistance less, thereby favoring the infection of diphtheria as well as any and all other infectious diseases.

Periodicity.—Hirsch has called attention to the possible cyclical character of the epidemicity of this disease, though the cycles have extended over periods of various lengths, many of them only a few years, others lasting several decades. In the city where I reside, the two periods of greatest prevalence of the disease that have existed since records have been kept were about ten years apart, these periods lasting about two years each; at other times, although the disease has been constantly present the number of cases has been comparatively low.

Modes of Dissemination.—The means of disseminating this disease are many; from person to person by means of infected clothing of all kinds, furniture, rooms, books, papers, foods, drinks (especially milk), milk tickets, money, domestic animals, such as dogs, cats, birds, etc., and at school from everything with which the child may come in contact, as almost everything conceivable may, under certain circumstances, become infected. There is no evidence that the disease can be disseminated by the air for more than a very few feet; it is usually necessary to come in actual contact with the bacillus at its lodging-place in order to become infected, and unless it is propelled for some little distance by the patient in coughing, it is rarely taken through the medium of the atmosphere.

Stage of Incubation.—The stage of incubation is usually short, not longer than two or three days; it may vary, however, being modified by the virulence or activity of the bacilli and the powers of resistance offered by the patient.

Prevention and Control of Epidemics.—In ordinary communities the health officer must first have great legal powers, and they must be executed if he is going to contend

with this disease; he must also have the hearty coöperation of all physicians in the vicinity. Without these two requisites he is absolutely powerless. The education of the people in the importance of sanitary matters is an admirable requisition, but it will not be sufficient alone, in our day and time, to cope with epidemics of diseases of any kind. The importance of law and the coöperation of physicians cannot be too highly appreciated by members of our own profession. Our medical schools need to impress this more emphatically on the minds of medical students.

Cases must be isolated early and long, and to do this in most families where the disease prevails, the cases must be reported to the health officers early. Every city and town should provide means for a bacteriological examination in any and all cases where there can be a question of doubt about the diagnosis, and this is often the case.

Every city and town should also be provided with an isolation hospital, or an isolation ward in a hospital, to which every case can be removed, if possible, and isolated from all other cases and placed under the charge of nurses trained in the care of infectious diseases. By these means a better chance of recovery is gained by the patient and the danger of spreading the disease is reduced to a minimum. These facts should be taught the people by the physicians in such earnestness that they cannot fail to learn the lesson. These hospitals should not be pest-houses nor disgraced by that name. Under modern scientific medical knowledge we have no longer any use for a pest-house, and one should not be tolerated in any civilized community. With the antiseptic and aseptic care of all patients with diphtheria, as carried out by modern trained nurses under the direction of competent physicians, in properly constructed isolated hospitals, the control of the infection is absolute. A case of diphtheria early diagnosed and removed to an isolation hospital, and kept there until fully recovered or until he dies and the body properly disposed of, and the house and infected articles in the house early and properly disinfected or destroyed by fire if of little or no value, will prevent a spread of diphtheria as effectually and surely as a problem can be solved in mathematics; but the details in each case must be correctly observed to ar-

rive at a successful result. Where a large number of cases exist in a community the same principles hold good, but it becomes a more complicated problem.

Isolation and disinfection are the key-notes of the prevention and spread of diphtheria, but the details of these two important measures must be as fully understood, and their importance as fully realized, in order to be successful, as the principles of asepsis in surgery.

Having isolated the patient and thoroughly disinfected all apartments and articles infected, and having cared for the case in the most approved manner known to modern trained nursing, there is one matter often lost sight of, that is, keeping the patient isolated long enough. It is well known that the bacilli of this disease may exist in the posterior naris and pharynx for a long time after all traces of exudation have disappeared, and it is decidedly unsafe to discharge patients from isolation until the mucous membrane is entirely healthy and has been thoroughly disinfected for several days after all appearance of a diseased condition has subsided.

No case, however light, should be discharged from isolation for at least four weeks from the time of the commencement

of the disease, and no child should be allowed to attend school or mingle with other children until the expiration of six weeks from the commencement of the last case in a house, in case of recovery, and in many instances a much longer period of time should be observed. In case of death, the body should be wrapped in a sheet wet in a proper disinfectant and immediately hermetically sealed, and should be prohibited from transportation, but should be buried or cremated within twelve hours after death, after which all apartments and articles infected should be thoroughly disinfected, and those of the family exposed should not be relieved from quarantine for at least seven days after the disposal of the body and disinfection. This rule should also apply to all persons exposed to a case of diphtheria before thorough isolation and disinfection, whether isolated at home or removed to a hospital.

By such measures only can we expect to control the ravages of this disease, and it will require a realizing sense of the importance of such measures on the part of the health officer, as well as courage and efficient police powers and police force, at times, to carry out such provisions successfully.—*The Journal*.

OVER-FED INFANTS; CAUSE, EFFECT, TREATMENT.

Work (*Jour. A. M. A.*) says: We can say properly that an infant is over-fed when it fails to digest and assimilate the food furnished it. The natural food of the new-born babe, all things being equal, is the food sent with it—the mother's milk—which for the first two or three days after birth seems to the inexperienced or unthinking mother or nurse very inadequate to the support of the child, but it is all that the little new creature can possibly, with certainty, digest and assimilate. Too often the mischief is played with the child during the initiatory period of its digestion. It is often difficult for the attendants in the nursery to realize or understand the untried weak condition of the whole digestive and correlative systems of the infant. In fact, we must consider that the whole new being with all its varied systems, both anatomic and physiologic, is in a primary rudimentary condition. Thus we observe the

simplest form of food which is naturally furnished it. Recognizing the foregoing fact, we should act intelligently if we are called upon to advise in artificial feeding, and select that food for the unfortunate infant which most nearly simulates the mother's milk. Unless disease is present with the mother, which is transmissible by her milk to the child, we should use our utmost endeavor to have it nurse the mother; as we have the best interests of both mother and child in view.

Some young mothers do not possess the best facilities for furnishing this natural food to their offspring, but there are very few who cannot be corrected in this respect by patient persistence. If the nipple is not drawn to dimensions sufficient to allow the babe to nurse well during the first two or three days after parturition, we may have to resort, unfortunately, to artificial feeding; for after lactation proper ensues there is usually such a tur-

gescence of the mamma that satisfactory modification of the nipple then is impossible, and after the usual application of pumps, plasters and various ointments to remove this gorged condition, the babe is virtually weaned; and if the child is so fortunate as to get its natural food, unless regular habits of feeding during the initiatory stage are observed, it is in danger, when lactation proper ensues, of over-feeding or being over-fed. There is a great temptation often on the part of the mother, which is largely selfish, to make a breast pump of her child, and thus its stomach is impaired. If normal regular habits as to nursing are well established, on the part of the child, commencing immediately after birth, which habit we know can be attained within seventy-two hours by allowing the child its own undisturbed time to rest or sleep, after first attending to all its needs as to proper cleansing, clothing and food, if it demands it, before tucking it in its little bed in a warm, properly ventilated nursery, allowing it to awake by force of hunger or some other cause peculiar to itself—some dictate of nature. When it awakes give it such care as will make it comfortable for another period of rest of from two to six hours, then put it to the breast again to its satisfaction. It may nurse itself asleep; then tuck it away again, and so on, and we can truly say it is a natural child, following natural habits of life. And, too, the mother by this habit of the child will find that the supply of food will adjust itself to the needs of the child, and by a little common sense on the part of all concerned in the care of the little one, there will be no danger of over-feeding and bringing on the invariable result, viz., indigestion, bad assimilation and perchance cholera infantum.

The result of over-feeding is the leading factor in the very great mortality in infancy and childhood. It is true that quality of food plays an important part in the ailments of children. Even in considering the zymotic diseases of children, by which diseases so often fond hopes are blighted, we must admit that the mortality is largely due to over-feeding prior to the inception of the disease. The disease is severe or not according to the fermented condition of contents of the alimentary tract. The decomposed contents of the *primæ viæ* is a fertile field for the rapid propagation of bacilli or disease

germs. Thus the severe form of the disease.

The incontrovertible law of cause and effect holds good in the consideration of our subject as well as in all things else with which we have to do. Not long since I was called to the bedside of a child twenty months old, who was feverish, emaciated and debilitated, even to inability to close its eyes; could scarcely utter a cry, had frequent curdy stools and vomited sour curd occasionally. Disease had been denominated cholera infantum. On inquiry of the mother I learned that the child had been sick at intervals for twelve months, and suffered similarly as at this time. Had employed four physicians during this period; child was weaned from its mother, and I learned that she was instructed to give it all the cow's milk it wanted and whenever it wanted it. The case required but little study to determine a diagnosis; cause, over-feeding; effect, the condition of child as above delineated. Before consenting to treat the case, I had the mother promise to follow my directions strictly. We all know how often a mother's sympathy or affections run away with her judgment and thus our directions are not followed, and the result is not satisfactory to either friends of patient or doctor. I ordered three teaspoonfuls of good fresh cow's milk (cow was in the barn near by) every three hours, preceded by a weak solution of bicarb. potassium and followed by two or three grains of catalysin and carbon. This treatment was to continue for twelve hours, and if vomiting ceased and stools less frequent, or change for the better, they were to give four teaspoonfuls at a time, and so on, as the child improved in its digestion and assimilation. We increased the amount of milk until twelve or fifteen drachms were given at a time, which was enough to cause the child to improve so that in four days I pronounced it well, and only had to advise temperate feeding.

Over-feeding the infant and the result following *directly* renders the system less resistant to the diseases of childhood and, in fact, may be a menace to its well-being throughout even a long life. On the other hand, if wisdom is used in following the dictates of nature (as God intended we should) in the feeding of infants, the foundation is laid, physically, for a long and useful life.

THE LIBRARY TABLE.

BOOK REVIEWS.

SYPHILIS IN THE INNOCENT (SYPHILIS INSONTUM). Clinically and Historically Considered, with a Plan for the Legal Control of the Disease. By Duncan Bulkley, A.M., M.D., Professor of Dermatology New York Post-Graduate Medical College; Physician to the New York Skin and Cancer Hospital, etc., etc. 8vo, 398 pages. New York: Bailey & Fairchild, publishers, 29 Park Row.

One critic has said that after reading this book one feels that even if he were an anchorite, living in the midst of the desert, he could not escape the ravages of the syphilis. While this may be true to a certain extent, the work is a very valuable one, showing as it does the modes by which the scourge can be transmitted in the routine of social and industrial duties to those who are leading perfectly pure lives. Fully one-half of the volume is taken up with an analytical bibliography, for which the highest praise must be accorded the author for his painstaking toil and the vast amount of labor necessary for its compilation. Tables are given of all the epidemics of syphilis, and also one including over nine thousand cases of extra-genital infection, besides which there is the record of over one hundred cases observed by the author himself.

Almost every article of common use is shown to be possible of carrying the contagion. Pipes, spoons, cups, bank-notes, even speaking-tubes, are shown to have communicated the plague. The bathing-robe from a public bath-house is responsible in two cases cited. There is hardly anything which is not shown to be a carrier of the poison, though it is curious to note that the water-closet, so often alleged by patients to be the source of infection, has only six cases credited to it, and some of these are so old and so briefly mentioned by those reporting them as to be of little scientific value. One of the curious cases reported is where wash-water transmitted the virus. Saddest of all are those instances where the physician, while engaged in his work of alleviating suffering, has conveyed the disease or himself fallen a victim.

The question of the legal control of syphilis is one to which the author has evidently given much thought. To quote from the work: "The subject of prostitution becomes a secondary consideration. The first question is not one of 'regulating prostitution' or of inspecting, licensing or legalizing the 'social evil' or of protecting those engaged in it. The legal control of syphilis has a much higher aim, namely, the prevention of the unnecessary extension of a disease which produces a vast amount of sickness, misery and death, not only among the guilty, but also among the perfectly innocent." The author urges that syphilis can be checked in its spread and that "the time has come to place it under the control of the proper health officers, and to make it quite as *criminal to transmit syphilis wittingly* as it is to communicate small-pox, scarlatina or diphtheria." This

plan, the author thinks, would act advantageously in various directions. The keepers of immoral resorts would see to it that the inmates were free from disease in order that action should not be brought against them. Moreover, they would take pains that the disease was not carried into the houses of ill-repute by the males frequenting them. Herein lies the important point of the author's argument: "Instead of examining the women publicly, those connected with the nefarious business would see that they were already in a healthy condition. They would then *examine the men*." This, he believes, would deter men from entering a house of prostitution if they knew that they would have to submit to such an examination, and those who were syphilitic would exclude themselves. He also thinks that it would act to a greater or less extent against clandestine prostitution, as it would be recognized that among this class the dangers of infection were greater and the men would fear the legal penalties if they infected others outside. Such a law would, therefore, in the author's belief, diminish the frequency of syphilis and would also be a step in the direction of breaking up licentiousness.

One cannot read this chapter without being struck with the force of the argument—the placing of the disease on the contagious list and the consequent necessity of *examining the men instead of the women*. The author thinks that the plan would be free from the objections always raised by a certain proportion of the community against the legalization of prostitution and the degrading influences of police inspection, though he confesses that much enlightenment and education on the part of the public is imperative before any method can be adopted for the check of the slow but steady increase of syphilis which is taking place.

The essay which is the foundation of the present work was deservedly awarded the Alvarenga Prize of the College of Physicians of Philadelphia, and while the book is of particular interest to the specialist, it is also so to the practitioner of general medicine as opening his eyes to the ravages of the disease among those whom he may have least cause to suspect and in whose lives there exists not the least shadow of wrong-doing. That it is one of the most exhaustive works which has ever been made of any one medical subject is not too much to say of it. E. J. M.

A MANUAL OF MODERN SURGERY, GENERAL AND OPERATIVE. By John Chalmers DaCosta, M.D. Philadelphia: W. B. Saunders, 925 Walnut Street. 1894.

At the present time there is demand for a book on the subject of surgery which shall stand midway between the quiz compend and the large text-book. This want the author has succeeded in filling; for he has produced a book which, though brief, is clear in style and clever in description.

In the chapter on bacteriology the author readily and without comment accepts as truths theories which the experience of the profession has not as yet shown to be absolutely correct. He follows the school of Metschnikoff rather than of Koch, the leader of thought in the bacteriological world.

The chapters on fractures and dislocations are very long in proportion to the size of the book, for the author wisely decides that as these form so important a part of the work of the surgeon they are worthy of considerable discussion.

In the chapter on abdominal surgery full and accurate directions are given by means of which the small intestine can be differentiated from the large bowel, the most important being in the difference between the attachment of the mesentery and the mesocolon.

The directions for anæsthesia and its complications are clear and explicit and surpass those found in the ordinary text-book on surgery.

Ophthalmology, gynecology, rhinology, otology and laryngology are not treated, because the writer considers that as these are special branches of surgery they should only be treated by the specialist. O.

LOCAL ANÆSTHETICS AND COCAINE ANALGESIA: THEIR USES AND LIMITATIONS. By Thomas H. Manley, A.M., M.D. St. Louis: J. H. Chambers & Co. 1894.

This unique and excellent monograph is the result of the author's long experience with local anæsthetics. All his statements are corroborated by cases cited from his own practice. He prefers local anæsthesia in the great majority of surgical cases, because it avoids all the deleterious after-effects of pulmonary anæsthesia. In his operations on the skull he prefers cocaine to ether, because under ether cerebral hyperæmia is produced which causes the brain and its membranes to protrude through the opening in the skull—a complication which is not met with under cocaine.

In hernia operations the mortality is decreased from 50 per cent., the ordinary rate, to 30 per cent. The large mortality in strangulated hernia he explains as follows: "Pain is a cardiac depressant of great potency, and when intensely poignant and long-continued induces deep collapse. Now it is well known that all pulmonary anæsthetics first stimulate and consecutively depress. Hence it may be in many cases of operation for strangulation ending mortally that the accumulative depression following the primary pain and the volatile chemical was too great for the recuperative powers of nature to overcome."

He has used thermal anæsthesia extensively in breaking up fibrous ankyloses.

He gives accurate directions for the use of cocaine hypodermically, preferring the "hub-and-spoke" method, which consists of one insertion of the needle and, after withdrawing it slightly, inserting it through the same opening in different directions under the skin.

As this monograph embodies the results of

many cases, the whole profession would do well to read it and learn some of the remarkable results that can be obtained by the use of local anæsthetics and the avoidance of all the disagreeable after-effects of pulmonary anæsthesia.

A SYNOPSIS OF THE PRACTICE OF MEDICINE. By William Blair Stewart, A.M., M.D.

The usual classification of diseases is adopted by the author, who has described in a concise manner everything relating to the practice of medicine.

Under the head of "Prophylaxis of Contagious Diseases" the author has made a serious mistake by recommending as a disinfectant a certain proprietary article of doubtful value. The profession is decidedly opposed to advertising patent preparations in the context of a book relating to medicine.

Appendicitis as such is not mentioned, but instead we have described typhilitis and perityphilitis, "terms which no longer imply pathological entities and are in most instances well relegated to obscurity."

That portion of the book relating to diseases of the blood, especially the anæmias, is carelessly written, for by following the author's description of the relation of the hæmoglobin to the red blood corpuscle, it would be impossible to differentiate between pernicious anæmia and chlorosis.

The chapters devoted to the fevers, infectious diseases and diseases of the respiratory tract are very clear and explicit and indicate a thorough knowledge of the subject.

As a whole the book is of a character to recommend itself to the student and the busy practitioner. J. O.

CLINICAL MEDICINE. By Judson S. Bury, M.D. Lond., F.R.C.P. London: Charles Griffin & Co., Limited. Philadelphia: J. B. Lippincott Company. 1894.

This work, which is designed for the use of students and young practitioners, consists of twelve chapters, as follow:

- I. Introductory.
- II. Symptoms for the most part subjective in character.
- III. Examination of the surface of the body.
- IV. Temperature.
- V. Examination of the skin and its appendages.
- VI. Examination of the respiratory system.
- VII. Examination of the circulatory system.
- VIII. Examination of the blood.
- IX. Examination of the digestive system and the abdominal organs.
- X. Examination of the urine.
- XI. Examination of the puncture fluids.
- XII. Examination of the nervous system.

The chapters devoted to the circulatory and respiratory systems are well written, but those parts relating to the blood and the urine are deplorably neglected. No method is given for the determination of sodium chloride. Boettcher's (bismuth) test, which is so frequently mentioned in the books as a counter-test for glucose, is also omitted. The

volumetric (Liebig's) method for the determination of urea, which can so readily be performed, is not described, but is stated as being inconvenient. The antiquated Gowers' hæmoglobinometer and hæmacytometer are preferred to the modern Thoma-Zeiss hæmacytometer and the Fleischel hæmoglobinometer, which are not even mentioned by name.

The chapter on nervous diseases is accurately written and harmonizes with modern teachings. With very few exceptions the book is exceeding accurate and can be relied on.

J. O.

THE ETIOLOGY OF OSSEOUS DEFORMITIES OF THE HEAD, FACE, JAWS AND TEETH. By Eugene S. Talbot, M.D., D.D.S. Third edition. Chicago: The W. T. Keener Company, 96 Washington Street. 1894.

Between the covers of this book there has been gathered together a large amount of data concerning the irregular development of the bony part of the head, which has been worked out from collections of skulls representing the peculiarities not only of races but also of classes.

The subject of the jaw comprises a broad field of observation, proving the distinct association of this part of the human body with the brain and nervous centers and likewise with the character and hereditary tendency of the individual.

Among the criminal classes and those of neurotic tendency there is a much greater proportion of irregularities in development about the head than is found among moral and healthy-minded individuals. Besides establishing these facts as to abnormalities of cranial development, an effort has been made to determine the normal condition of the height of the palatine arch and the distance between the first molars of the upper jaw.

The author has departed from his immediate professional work and entered the new field of anthropology, in which so far he has been eminently successful, judging from the results of his work.

SYLLABUS OF THE OBSTETRICAL LECTURES IN THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF PENNSYLVANIA. By Richard C. Norris, A.M., M.D. Third edition. Philadelphia: W. B. Saunders, 925 Walnut Street. 1894.

The author in the preface to the first edition states his hope that the book may be of service to the medical student.

This hope has apparently been gratified, for we have before us the third edition.

The book is a syllabus of a series of didactic lectures, which are much condensed without in the least impairing their usefulness.

It does not pretend to obviate regular attendance upon the lectures, but seeks to aid the student in the difficulties of taking useful notes.

This edition is brought up to date by the addition of such new material as has appeared in the course during the last two years.

INTERNATIONAL CLINIC: A QUARTERLY OF CLINICAL LECTURES ON MEDICINE, NEUROLOGY, SURGERY, GENITO-URINARY SURGERY, GYNECOLOGY, OBSTETRICS, OPHTHALMOLOGY, LARYNGOLOGY, PHARYNGOLOGY, RHEINOLOGY, OTOLOGY AND DERMATOLOGY. Edited by Judson Daland, M.D.; J. Mitchell Bruce, M.D., F.R.C.P.; David W. Finlay, M.D., F.R.C.P. Volume III. Fourth series. 1894. Philadelphia: J. B. Lippincott Company.

This volume is the third of an interesting series. It contains forty-seven articles, which are reproductions of many clinics and comprise almost every disease to which the human flesh is heir. The papers not only represent what clinical professors say about their cases, but also what they do.

Any one who wishes to keep up with modern clinical methods cannot readily afford to be without this quarterly journal.

There are three articles devoted to the interesting subject of diabetes which are written by specialists on that subject.

The clinic of Roswell Park, of Buffalo, on the subject of "Perineal Section Following Suprapubic Cystotomy and Hernia," is very good. A. D. Rockwell's article on "Neurasthenia Versus Lithæmia" is also worthy of consideration.

The clinics of the German authorities are excellent, but the translations are very unsatisfactory.

HOME TREATMENT FOR CATARRHS AND COLDS. By Leonard A. Dessar, M.D. New York: Home Series Publishing Company. 1894.

This little handbook has been written with the idea of providing the laity with knowledge of how to take care of colds and kindred affections. In very simple language the principal affections of the ear, nose and throat are described, together with the remedies which are usually employed by physicians in such cases. What makes the book valuable to the ordinary reader is the entire absence of technical terms and the simple manner of description.

O.

A MANUAL OF THE PRACTICE OF MEDICINE. By A. A. Stevens, A.M., M.D. Third edition. Philadelphia: W. B. Saunders, 925 Walnut Street. 1894.

The author has not tried to furnish the profession or the student with a new work on the practice of medicine. He has simply collected from the ponderous text-books the most important facts and arranged them in a readily assimilable manner, using his broad experience as a teacher in the medical schools to guide him in his work. He has thrown out all theories and unnecessary explanations and has gathered together in a manual a useful outline of the practice of medicine.

ESSENTIALS OF DISEASES OF THE SKIN. By Henry W. Stelwagon, M.D., Ph.D. Philadelphia: W. B. Saunders, 925 Walnut Street. 1894.

That this compend, which is indeed carefully written, has reached a third edition is evidence that it has at least found favor among that class of medical students who desire to take a short cut to knowledge. "A

"little knowledge is a dangerous thing," and the student who relies on quiz compends or manuals for his medical education gets the "little knowledge" which will make him dangerous as a physician later on in life.

SYLLABUS OF LECTURES ON HUMAN EMBRYOLOGY. By Walter Porter Manton, M.D. Philadelphia: The F. A. Davis Company, publishers. 1894.

The object of this syllabus is to furnish to students and practitioners the main facts of embryology. It follows the teachings of such authorities as Balfour and Foster, and harmonizes with the latest English edition of Gray's "Anatomy." Therefore it is to be considered as being trustworthy.

FIRST AID TO THE INJURED. By E. J. Lawless, M.D. Philadelphia: J. B. Lippincott Company. 1894.

This book has for its object the instruction of those who act in emergencies on the battle-field and in military camps. The chapters devoted to hemorrhage, fractures and wounds are concise and reliable, and for the treatment of these conditions minute descriptions are given, involving the use of such materials as are found in the hands of every soldier.

THE POCKET ANATOMIST. By C. Henri Leonard, A.M., M.D. Eighteenth revised edition. Detroit: The Illustrated Medical Journal Company, publishers.

This pocket anatomist is really Gray boiled down and condensed into the very smallest space possible. It is only intended as a help to the student in his preparation for an examination in anatomy, and as such is well executed.

A MANUAL OF HUMAN PHYSIOLOGY. By Joseph H. Raymond, A.M., M.D. One hundred and two illustrations in the text and four full-page colored plates. Philadelphia: W. B. Saunders. 1894.

This book is clearly printed and neatly bound; covers the subject at length in an interesting style and with sufficiently minute detail for any purpose except the preparation of a medical student for final examination on the subject, and would be a help even then. W.

PRACTICAL MANUAL OF THE DISEASES OF WOMEN AND UTERINE THERAPEUTICS. By H. Macnaughton-Jones, M.D., M.Ch., M.A.D. (Hon. Caus.). Sixth edition. London, England: Balliere, Tindall & Cox, 20 King William Street, Strand.

The book commends itself alike to the gynecologist as well as the student, for there is much in it of interest to both. This edition, as compared with the other editions, is a comparatively new book, for it has been in greater part rewritten and is completely rearranged and reillustrated. Considerable additions have been made, especially in the pathological and surgical portions, to keep pace with the rapid advancement in those branches of gynecology. Several new chapters on uterine reflexes, sutures and ligatures, the surgical treatment of uterine fibromata, affections of the Fallopian tubes, tubal pregnancy and ovarian affections have been added. The type is good, the engravings clear and the book compact. Altogether this volume will be "found useful as a safe guide by the practitioner and an assistance in the study of this branch of his profession by the student." W. C. G.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISON J. MORRIS, M.D., AND SAMUEL M. WILSON, M.D.

THE PHYSICIAN AND SURGEON

for October. Dr. Don. M. Campbell writes of

The Surgical Treatment of Granular Conjunctivitis: A Modified Instrument.

Giving a long list of synonyms, the author states that the disease is very rebellious to treatment and often baffles even a specialist. A long list of remedies highly praised by various men is given and appears to divide itself into (1) astringents, irritants and caustics; (2) antiseptics.

The disease appears due to specific organisms causing the growth of the trachoma, deposits of lymphoid tissue in the inflamed conjunctiva.

The micro-organism growing in these granules makes their crushing necessary before we can destroy the growth.

While rasping, excision, etc., have been

successfully used, the best means of treatment seems to be by Knapp's roller forceps, and as the pattern generally made permits a portion of the membrane to escape uncrushed, the author uses a modification, which he pictures, in which the rollers project beyond the jaws of the forceps.

Crushing is not sufficient, however, and after performing the operation nitrate of silver, sulphate of copper or bichloride of mercury should be applied in crystal or in solution, as seems best suited to the case, until cure results.

The cases reported where a single application of any kind results in complete cure generally are proven to have been simply papillary conjunctivitis.

Dr. Delos L. Parker writes of

Singultus.

Four cases are given of hiccupping which resisted ordinary remedies. In one instance

the patient was suddenly seized when in seemingly good health; another was convalescing from dysentery; a third was dying from tuberculosis; and the particulars of a fourth case are not given. In each case cupping the epigastrium gave immediate relief, and in each case it was necessary to repeat the operation in two hours, but not again. The recurrence in two hours seems inexplicable, but the cupping is supposed to relieve by overcoming the diaphragmatic spasm by equalizing atmospheric pressure above and below.

At a meeting of the Detroit Medical and Literary Society Dr. Hitchcock reported a case of

Rupture of the Intestine.

A man working in a sawmill was violently struck in the right groin and right side of the scrotum by a board. He was seen about three hours afterward and had taken about $\frac{1}{2}$ grain of morphine to relieve his pain.

There had been vomiting, and pain referred to the end of the penis. No decisive symptoms were found; the pulse was about 88. Soothing applications were ordered.

Seen the next morning, the temperature was 97.6°; the pulse too rapid to count; an emphysematous crackling could be distinguished at the seat of injury under an uninjured skin. Rupture of the intestine was diagnosed and operated for, and the colon found torn, with its contents free in the abdomen.

The patient died shortly after removal from the table, and the case was reported to show how little disturbance might be shown by a person injured in this manner. A couple of other members recalled somewhat similar cases in which there was the same absence of prominent symptoms, or even injury of the skin, and resulting in early death.

Other papers in this issue are "External Perineal Urethrotomy," by Dr. Ernest T. Tappey; "Infantile Eczema, Especially in its Relation to the Infant's Face," by Dr. Andrew P. Riddle.

A Russian physician is recorded as having discovered that small doses of tincture of strophanthus, given about three times daily, produces a distaste for liquor in excessive users of alcohol.

IN THE BRITISH JOURNAL OF DERMATOLOGY

Dr. Wm. Anderson reports two cases of

Eruption Cheloid.

The patches of cheloid here did not extend marginally beyond their original area. Under the microscope, however, they showed the typical structure of spontaneous cheloid—the normal tissue being replaced by white fibrous bands in the dermal layer, the papillae and rete-cones being unchanged.

In the first case the patient was a healthy-looking boy. On the knees and elbows were

patches of psoriasis, on the body a number of spots ranging in size from a pin head to a three-penny piece with dull surface and a surrounding pale areola. Interspersed with these were patches with smooth, milky white skin, slightly elevated and free from hair follicles.

The patient said these appeared in spots previously to the seat of the eruption, and a spot was found in transition.

A spot was excised and found to be interlacing fibrous bands covered by papillae and rete-cones. The marginal vessels were enlarged and surrounded by areas of unclear proliferation.

Under chrysophanic ointment the psoriasis improved rapidly, the spots improved more slowly, and later some of the cheloid spots seemed to contract and pass away spontaneously without leaving any trace.

Drawing a moistened stick of nitrate of silver around a spot caused a ring of eruption, but this disappeared.

The second case was a woman aged 28 years. The patient was tuberculous. The eruption was on the backs of the hands and disappeared under carbolic-acid ointment.

The other paper in this issue is on "Dermato-Neuroses," by Dr. St. Leloir.

BUFFALO MEDICAL AND SURGICAL JOURNAL

for November. Dr. M. Hartwig comments on the neglect of English journals to discuss the use of "ambulatory splints" in treating fractures of the lower extremities.

This treatment is being adopted in Germany and consists in the application of a splint or plaster bandage to secure apposition of the fragments, and in addition a modification of Taylor's splint for hip-joint disease, thereby supporting the body by upright splints attached to the pelvis.

Dr. Albers, of the Prussian army, combines strips of wood with a plaster bandage, obtaining the same result with a less cumbersome apparatus.

Dr. Henry L. Elsner writes of

Mixed Infection in Pulmonary Tuberculosis.

The conditions described are due to the presence at the same time of tubercle bacilli and some other infecting organism, usually the pneumococcus of Friedlander. Some of these conditions have been known for a long time, without the cause of the peculiar symptoms being recognized.

Besides the miliary form of acute tuberculosis we meet with a variety which seems broncho-pneumonic, is accompanied by hæmoptysis, and has been described as due to inspiration of bacilli, and a third which closely resembles acute pneumonia, and the green sputum frequently found in this, and which may also occur in uncomplicated pneumonia, furnished the title of a paper by Traube.

Cheesy pneumonia is not marked at the outset by the sharp chill which is usually found in simple croupous pneumonia; bron-

chial breathing appears late in the disease, sometimes the end of the second week, and instead of the characteristic subcrepitant rale we find a coarse mucous one.

Giving the theories of some other men, the author concludes that the only way of obtaining a clear diagnosis is by careful and repeated microscopic examinations of the sputa. Micrococci, streptococci and staphylococci are all found in tuberculous cases, and the significant statement is made that the injection of tuberculin renders animals susceptible to germs that had lost the power to injure healthy subjects.

The presence of this diffusible poison therefore predisposes to attacks of inflammation (pneumonia, for example).

The author classifies the cases of mixed infection clinically recognized by him as follows:

1. Cases of acute fibrinous pneumonia in which the disease attacks an area of lung tissue the greater part of which is the seat of infiltrating but latent tuberculosis. The tuberculosis here usually had origin or was coincident with disease in another organ, and usually gave no subjective symptoms until the appearance of the pneumonia.

2. Cases in which acute croupous or catarrhal pneumonia occurs near and causes changes in previously recognized tubercular areas. The pneumonia terminates by crisis or lysis and is not associated with early hæmoptysis. (b) Cases where the pneumonia occurs, without early hæmoptysis, in distant areas or in the other lung and the tubercular disease becomes actively progressive.

3. Streptococcus pneumonia, in which pneumonia develops from the aspiration of infecting agents from the seat of original infiltration in a case of latent or active pulmonary tuberculosis. Hæmoptysis is usually present during the stage of acute exacerbation or immediately preceding the pneumonia.

4. Cases of acute broncho-pneumonia, occasionally fibrinous, with concurrent bacillary infection, where as a result of lowered vitality there occurs rapid disorganization of lung tissue, cheesy infiltration, coagulation necrosis and death.

Analyzing his experiences somewhat further, the writer gives a minute account of a case in which, about fourteen months after the emptying and healing of a tubercular ischio-rectal abscess, a well-nourished man of 36 years developed pneumonia. At the outset the case seemed typical croupous pneumonia, except that it was limited to the right apex and gave absolute flatness when first seen. Microscopic examination of the sputa showed pneumococci but no bacilli. For a week the case was typical of croupous pneumonia, then a profuse perspiration sent the temperature to 99°, then it rose to 101° and tubercle bacilli could be found in the sputa. The case now showed more and more tubercular symptoms and died fifteen weeks from the outset. The author thinks tubercle bacilli can, without assistance from other disease germs, cause a pneumonia which cannot be diagnosed from croupous pneumonia except by the aid of a microscope.

The same number contains "A Review of the Relations Between the State and the Medical Profession in New York," by Dr. Frank Whitehill Hinkle.

JOURNAL OF CUTANEOUS AND GENITO-URINARY DISEASES

for November. Dr. Wm. Thomas Corlett writes of

Cold as an Etiological Factor in Diseases of the Skin.

A number of cases are described at length, the common features being as follows: A sudden eruption resembling herpes; the vesicles rupturing and leaving a ham-colored weeping surface, which becomes a faded rose color covered by fine scales. The eruption appears at the approach of cold weather, involves the dorsal surface of the hands or feet, disappears spontaneously at the approach of warm weather, and is not, to the author's knowledge, due to any bodily condition. Paroxysms of itching may occur, and there is a distinct tendency to return annually to the surface formerly affected.

Dr. James C. White reports a case of

Pityriasis Rubra Pilaris.

A young lady of 27 years whose skin was previously healthy noticed her palms and soles becoming red and scaly, the scalp full of dandruff, the face red and branny and papules forming. The face was a uniform dull red color and slightly scaly and thickened. The scalp was covered with a thick layer of scales, with apparently little fat. The upper part of the chest and the neck also roughened, red and infiltrated. The palms, the soles and the extensor surfaces of the fingers were greatly thickened, and the lines of flexure marked by deep and painful fissures.

Over all other parts of the body the condition was different. The mouth of almost every follicle was filled by a horny papule, varying from a pin-head to an upholsterer's tack in size. These were slightly redder than the intervening skin. For the most part this resembled no other skin affection, but where the lesions were smallest it was somewhat like keratosis pilaris. The horny papules are the distinctive features of the affection, and except for them the disease might be mistaken for seborrhoea or eczema.

Erythème Induré des Scrofuleux.

A boy twelve years old, at first thought subject to erythema nodosum. The lesions were larger, more deeply seated, and more generally distributed over the lower limbs than usual, continued to develop for many weeks, and then many broke down, forming deep, indolent, refractory ulcers.

Another case was a girl of eighteen, with a few deeply imbedded nodules on the lateral and posterior surfaces of the legs and a few smaller ones on the arms.

Thorough syphilitic treatment was given, but many of the lesions formed indolent ulcers and the case disappeared from view. Other cases presented similar features.

At the outset these nodules were covered by seemingly normal skin and did not present the brilliant hyperæmia of erythema nodosum; also, instead of occupying the anterior surfaces, they were mainly found on the lateral and posterior parts.

The author does not recognize the right to the title indicating a tubercular origin, as he knows of no satisfactory bacteriological examination.

Lymphangioma Circumscriptum.

A man 34 years old showed the following: The left lateral thorax from the axilla to the last rib and from the nipple to the anterior margin of the scapula was occupied by—

1. Groups of prominent vesicles varying in size from the head of a pin to a small pea, with very thick and firm epidermal coverings. The contents were colorless, or dirty yellowish, and of rather thick consistence. On the borders the vesicles formed small and sparse groups, but in the central portion were densely crowded. By rupture they were converted into oozing areas.

2. Large elevated crusts, thick and of firm consistence, yellow or reddish in color, formed apparently by coagulation of the contents of the vesicles. Some of them were two or three inches in diameter.

3. Crimson elevations of pea size, resembling angiomatous new growths of cock's-comb character. They were firm, became slightly paler on prolonged pressure, and were sparsely interspersed among the vesicles.

4. Verrucous nodular masses of considerable size and height, some of them capped by dense horny concretions.

The whole upper arm presented on its inner surface similar but more pronounced lesions.

Microscopic examination of a lesion showed lymph vessels connecting with cavities consisting of dilated lymph vessels or spaces of similar formation. The author favors the opinion that these were of new formation and not dilated vessels simply. There was no true elephantiasis.

Multiple Benign Cystic Epithelioma.

This case is reported because the adjective benign seems misplaced, and it leads to the question whether these cases do not all tend toward malignancy.

The patient is a woman of 45 years, the mother of eleven children, only three surviving. No member of her family suffers from any skin eruption.

At the age of twenty four a few firm pimples appeared scattered over her face, and others kept growing until three years ago. Ten years ago some underwent softening and were removed with caustic preparations, leaving only flat scars. About fifty lesions are to be found over the face, varying from small flat, almost invisible tubercles, larger reddish lesions, one of which is the size of a quarter dollar, to two or three much more prominent, presenting abrupt edges with depressed centers resembling Hutchinson's crateriform epitheliomata and measuring from one-half to three-quarters of an inch in long diameter.

The right upper eyelid is the seat of a rodent ulcer, closing the eye.

Sections from some of the lesions showed, microscopically, masses of epithelial cells, and often showed direct connection between these and the lower rete layers. These cells were often found to surround small cysts containing sometimes a corneous substance, sometimes cells undergoing colloid change.

Dr. John P. Bryson writes of

The Question of Surgical Interference in Tuberculous Kidney.

In the author's experience when a case presents itself there is invariably infection also of the lower urinary passages, and usually of the seminal vesicles and the prostate, before there appears to be excuse for surgical interference.

"When in kidney colic," the author says, "the pain shoots quickly into the testis and causes its marked retraction the cause is situated low down in the ureter; but the cause of the trouble is up toward the kidney or in that organ when, in the absence of this set of symptoms, the pain quickly passes to the opposite side and causes nausea and vomiting."

The author thinks that so many points are to be taken into consideration in every case that no generalized rules can be laid down for operation in these cases.

He is decidedly opposed to interference, when avoidable, for fear of rendering a chronic inflammation acute. To relieve fever and suppuration by incision and drainage or the removal of a stone is an imperative duty, but to attempt to cure a latent disease by operation is useless.

ARMY AND NAVY.

CHANGES IN THE U. S. ARMY FROM NOVEMBER 25, 1894, TO DECEMBER 1, 1894.

The extension of leave of absence on surgeon's certificate of disability granted First Lieutenant Henry R. Stiles, Assistant Surgeon, is further extended two months on account of sickness.

Leave of absence for one month, to take effect on or about December 10, 1894, is granted First Lieutenant Charles Lynch, Assistant Surgeon, with permission to apply for an extension of one month.

NEWS AND MISCELLANY.

Important to Commercial Travelers.

On and after December 1st, Baggage Agents of the B. & O. R. R. Co. will accept coupons from mileage books issued by B. & O. R. R., P. & W. R'y, B. & O. S. W. R'y and Valley R'y of Ohio, in payment for excess baggage charges, at their face value, 2 cents each. This arrangement will not include B. & O. Mileage Books indorsed "good only on B. & O." B. & O. Southwestern Mileage Advertising Books, nor books older than one year from date of issue.—2t